PIONEER®
*The Art of Entertainment*

# Service Manual

ORDER NO.
**ARP2988**

## PROJECTION MONITOR RECEIVER

# PRO-200
# PRO-100

● **Refer to the service manual ARP2936 for PRO-119 and PRO-99.**

**THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).**

| Type | Model | | Power Requirement | Remarks |
|---|---|---|---|---|
| | PRO-200 | PRO-100 | | |
| KUXC/CA | ◯ | ◯ | AC120V | |

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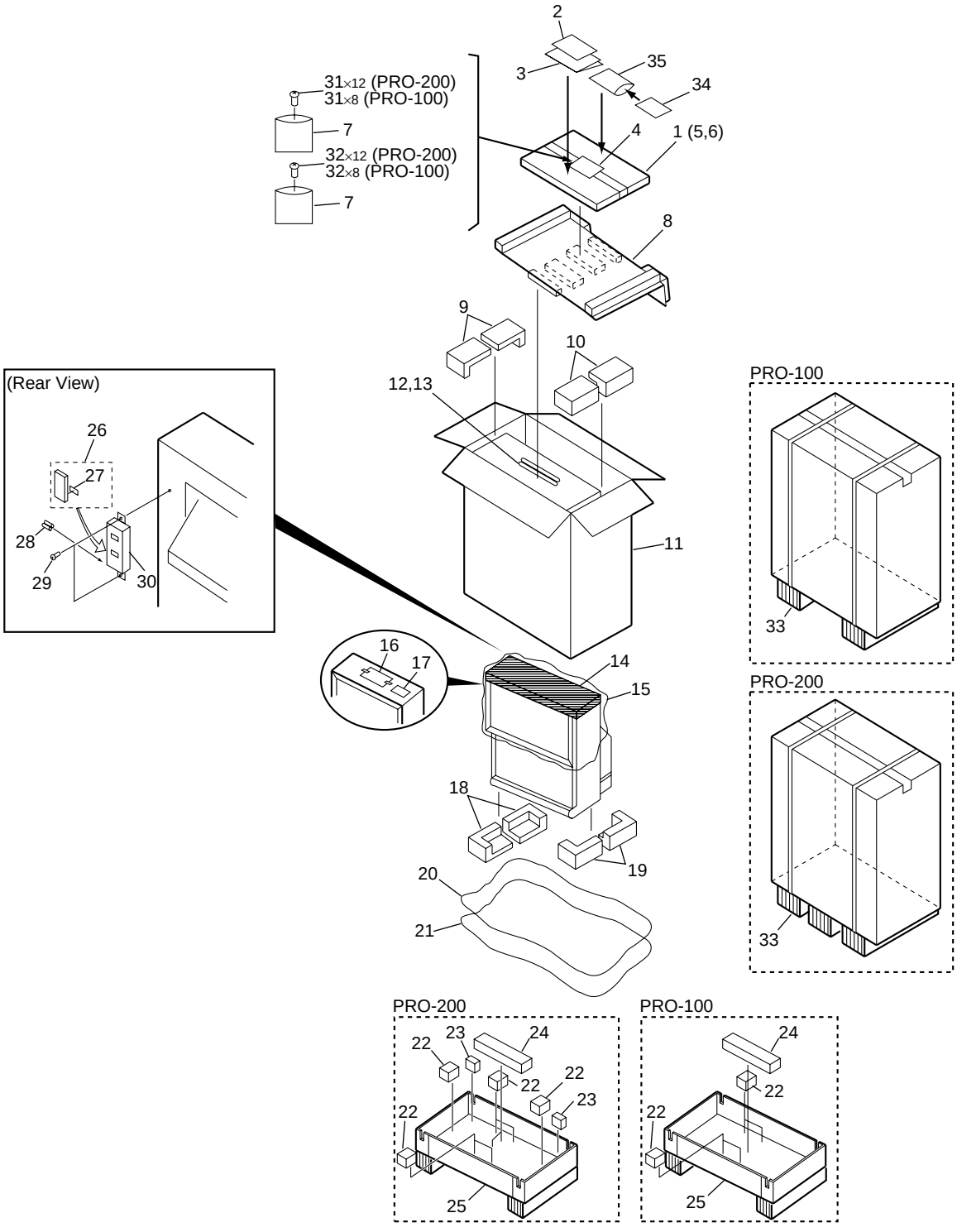
# 1. EXPLODED VIEWS AND PARTS LIST

*NOTES:*
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by ☆ are important parts which relate in X-rays radiation. If any of these parts need to be replaced, always replace with specified parts.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*
- *For POWER SUPPLY ASSY, AWV1558 is used, but for serving, AWV1565 is supplied. AWV1565 is the same as AWV1558 of which X-ray protection and high voltage sections have been adjusted and these adjusted parts are covered with the shield cases. Therefor, AWV1565 need not be adjusted.*

## 1.1 PACKING



## (1) PACKING PARTS LIST

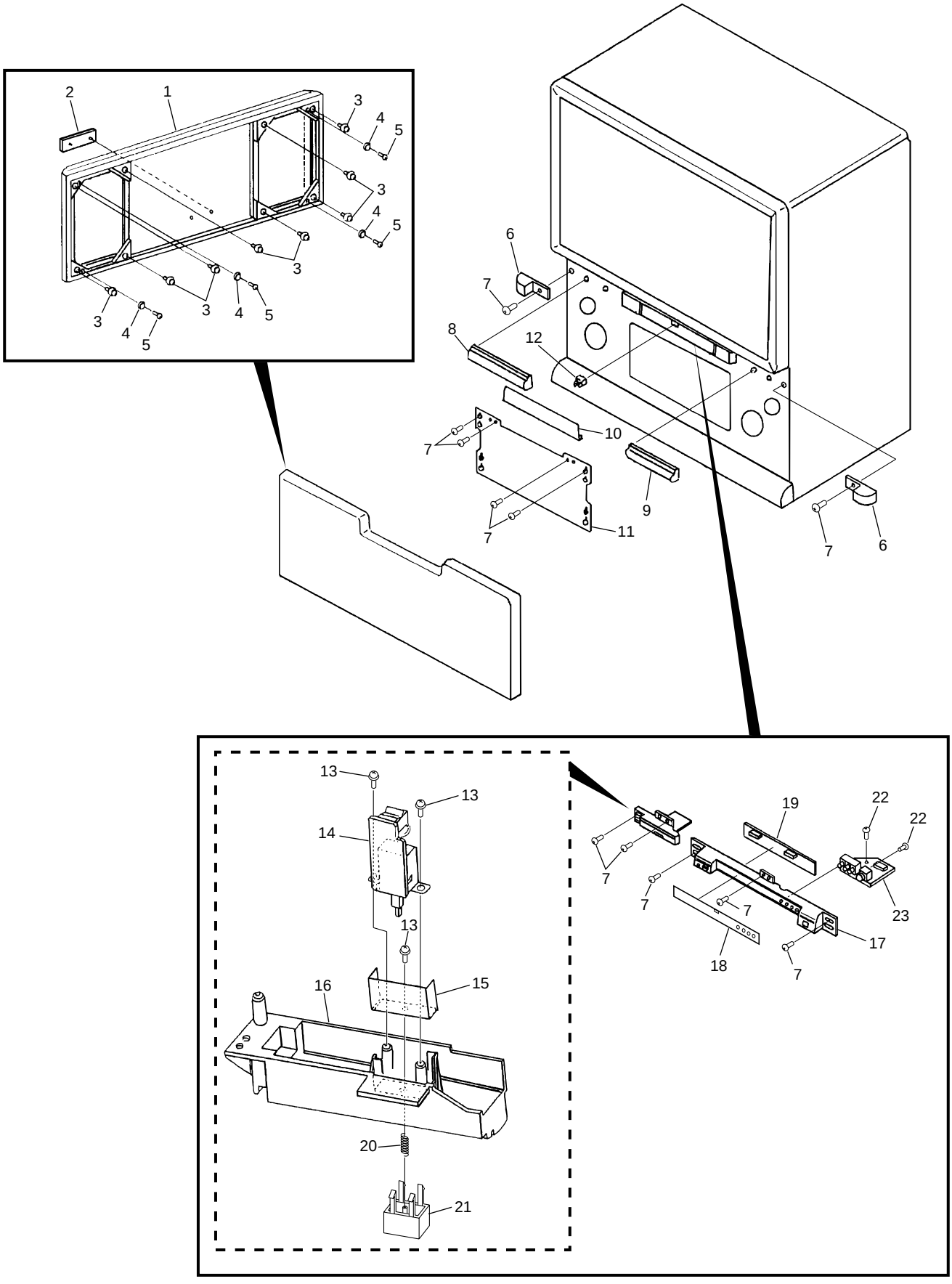
| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 1 | Card Board Case (60) | See Contrast table (2) |
| | 2 | Attention Card | ARM1108 |
| | 3 | Operating Instructions (English) | ARB1515 |
| NSP | 4 | Literature Bag | AHG1222 |
| NSP | 5 | Acrylic Panel (60) | See Contrast table (2) |
| | 6 | Acrylic Caution Card | ARH1152 |
| NSP | 7 | Wrapper Bag | AHG1076 |
| | 8 | Card Board Spacer (60) | See Contrast table (2) |
| | 9 | Upper Pad L | AHA2067 |
| | 10 | Upper Pad R | AHA2068 |
| | 11 | Upper Carton (60P) | See Contrast table (2) |
| | 12 | Frame Cover Assy (60) | See Contrast table (2) |
| | 13 | Frame Cover V Assy (60) | See Contrast table (2) |
| NSP | 14 | Vinyl Sheet 60 Upper | See Contrast table (2) |
| NSP | 15 | Packing Sheet (60) | See Contrast table (2) |
| | 16 | CONVER Attention Card | ARM1139 |
| | 17 | Caster Caution Card | See Contrast table (2) |
| | 18 | Under Pad L | AHA2069 |
| | 19 | Under Pad R | AHA2070 |
| NSP | 20 | Packing Sheet 60L | See Contrast table (2) |
| | 21 | Vinyl Sheet 60 Under | See Contrast table (2) |
| | 22 | Cushion F | See Contrast table (2) |
| NSP | 23 | Cusion D | See Contrast table (2) |
| NSP | 24 | Cusion C | AHA2076 |
| | 25 | Under Carton (60P) | See Contrast table (2) |
| | 26 | Remote Contorol Unit (CU-SD104) | AXD1430 |
| | 27 | Battery Cover | AZN7327 |
| NSP | 28 | Alkaline Dry Cell Battery (LR6,AA) | AEX1018 |
| | 29 | Special Screw | ABA1239 |
| | 30 | CU Packing Case | AHC1019 |
| | 31 | Screw | ABA1226 |
| | 32 | Screw | BMZ40P100FZK |
| | 33 | Carton Runner Pad (60P) | See Contrast table (2) |
| NSP | 34 | Warranty Card EL | ARY1026 |
| NSP | 35 | Poly Bag | AHG1285 |

## (2) CONTRAST TABLE

PRO-200/KUXC/CA and PRO-100/KUXC/CA are constructed the same except for the following :

| Mark | No. | Symbol and Description | | Part No. | | Remarks |
|---|---|---|---|---|---|---|
| | | PRO-200/KUXC/CA | PRO-100/KUXC/CA | PRO-200/KUXC/CA | PRO-100/KUXC/CA | |
| | 1 | Card Board Case (60) | Card Board Case (51) | AHB1154 | AHB1152 | |
| NSP | 5 | Acrylic Panel (60) | Acrylic Panel (51) | AAK2633 | AAK2632 | |
| | 8 | Card Board Spacer (60) | Card Board Spacer (51P) | AHB1162 | AHB1172 | |
| | 11 | Upper Carton (60P) | Upper Carton (51P) | AHD2962 | AHD2961 | |
| | 12 | Frame Cover Assy (60) | Frame Cover Assy (51) | AAP1521 | AAP1520 | |
| | 13 | Frame Cover V Assy (60) | Frame Cover V Assy (51) | AAP1557 | AAP1560 | |
| NSP | 14 | Vinyl Sheet 60 Upper | Vinyl Sheet XL | AHG1233 | AHG1095 | |
| NSP | 15 | Packing Sheet (60) | Packing Sheet (50,45) | AHG1230 | AHG1120 | |
| | 17 | Not used | Caster Caution Card | Not used | ARM1117 | |
| NSP | 20 | Packing Sheet 60L | Packing Sheet | AHG1235 | AHG1156 | |
| | 21 | Vinyl Sheet 60 Under | Vinyl Sheet MS | AHG1234 | AHG1258 | |
| NSP | 22 | Cushion F | Cushion E | AHA2211 | AHA2081 | |
| NSP | 23 | Cushion D | Not used | AHA2077 | Not used | |
| | 25 | Under Carton (60P) | Under Carton (51P) | AHD2967 | AHD2966 | |
| | 33 | Carton Runner Pad (60P) | Carton Runner Pad (51P) | AHA2202 | AHA2201 | |

## 1.2 FRONT VIEW (1/2)



## (1) FRONT VIEW (1/2) PARTS LIST

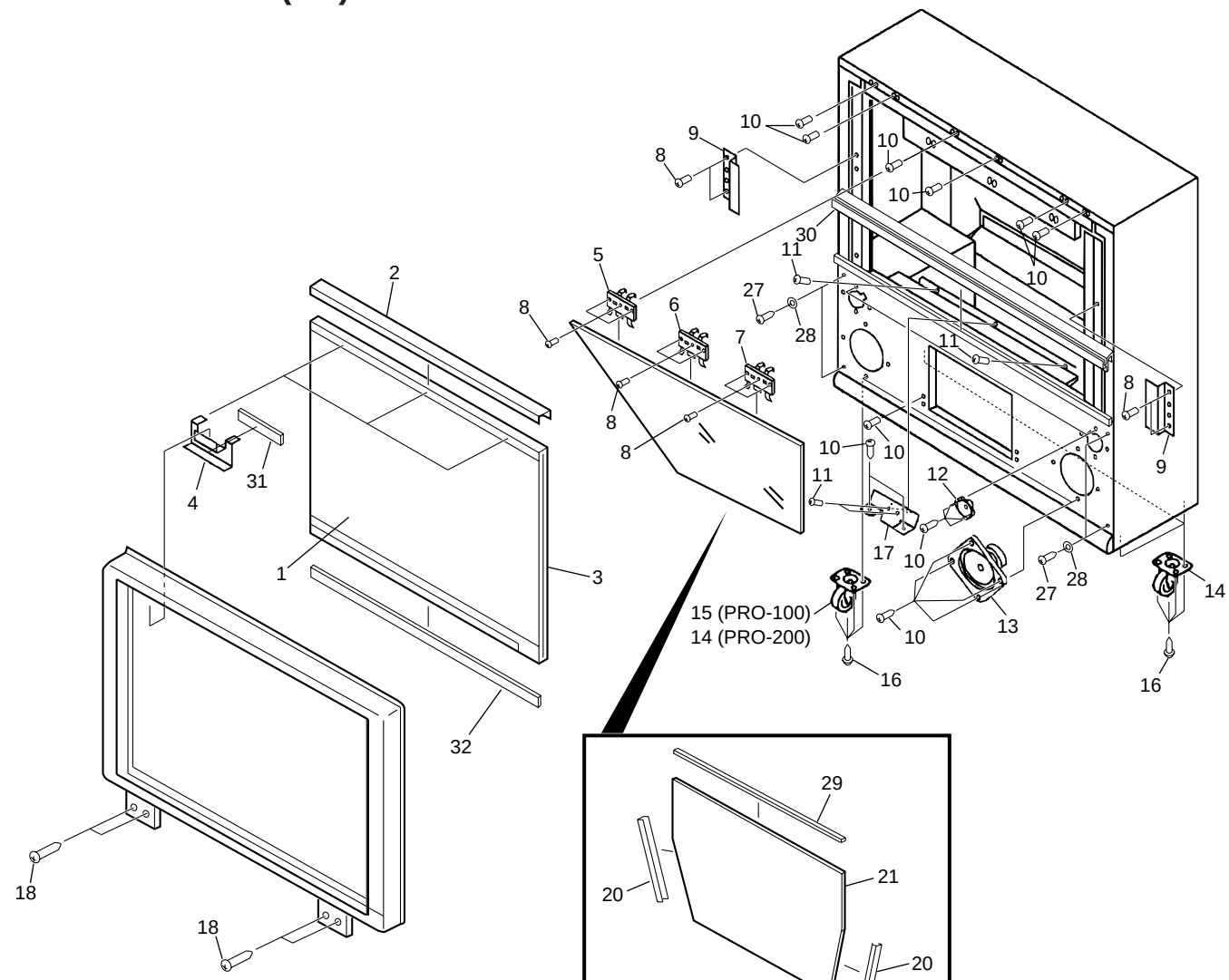
| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 1 | Grille (60) | See Contrast table (2) |
| | 2 | ELITE Badge | AAM1076 |
| NSP | 3 | Catcher A | ANZ-241 |
| | 4 | Magic Tape | AEC1394 |
| | 5 | Screw | BYC35P160FZK |
| | 6 | Side Cover | See Contrast table (2) |
| | 7 | Special Screw | ABA1240 |
| | 8 | Side Panel Assy (60L) | See Contrast table (2) |
| | 9 | Side Panel Assy (60R) | See Contrast table (2) |
| | 10 | Door Assy | AAN1413 |
| | 11 | Blind Plate | AMM2577 |
| | 12 | Catcher F2M | AEC1609 |
| | 13 | Screw | APZ30P080FZK |
| | 14 | MAIN SW Assy | AWZ6114 |
| NSP | 15 | Front Shield | ANK1502 |
| | 16 | Sub Panel Assy | AMB2556 |
| | 17 | Front Panel Assy | AMB2614 |
| | 18 | Control Sheet | AAK2715 |
| | 19 | FRONT CONTROL Assy | AWZ6299 |
| | 20 | Coil Spring | ABH1099 |
| | 21 | Power Knob | AAD4090 |
| | 22 | Screw | ABZ30P080FZK |
| | 23 | FRONT INPUT Assy | AWZ6118 |

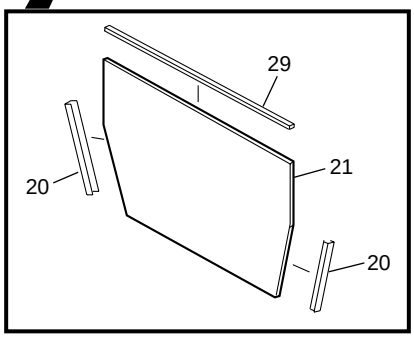
## (2) CONTRAST TABLE

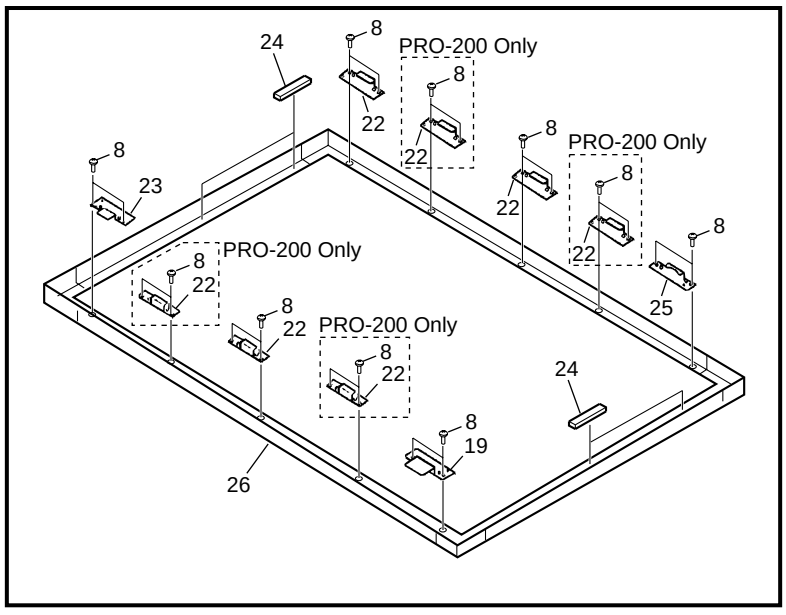
PRO-200/KUXC/CA and PRO-100/KUXC/CA are constructed the same except for the following :

| Mark | No. | Symbol and Description | | Part No. | | Remarks |
|---|---|---|---|---|---|---|
| | | PRO-200/KUXC/CA | PRO-100/KUXC/CA | PRO-200/KUXC/CA | PRO-100/KUXC/CA | |
| | 1 | Grille (60) | Grille (51) | AMM2584 | AMM2585 | |
| | 6 | Side Cover | Side Cover | AMR2743 | AMR2573 | |
| | 8 | Side Panel Assy (60L) | Side Panel Assy (51L) | AMB2583 | AMB2584 | |
| | 9 | Side Panel Assy (60R) | Side Panel Assy (51R) | AMB2616 | AMB2615 | |

## 1.3 FRONT VIEW (2/2)



## (1) FRONT VIEW (2/2) PARTS LIST

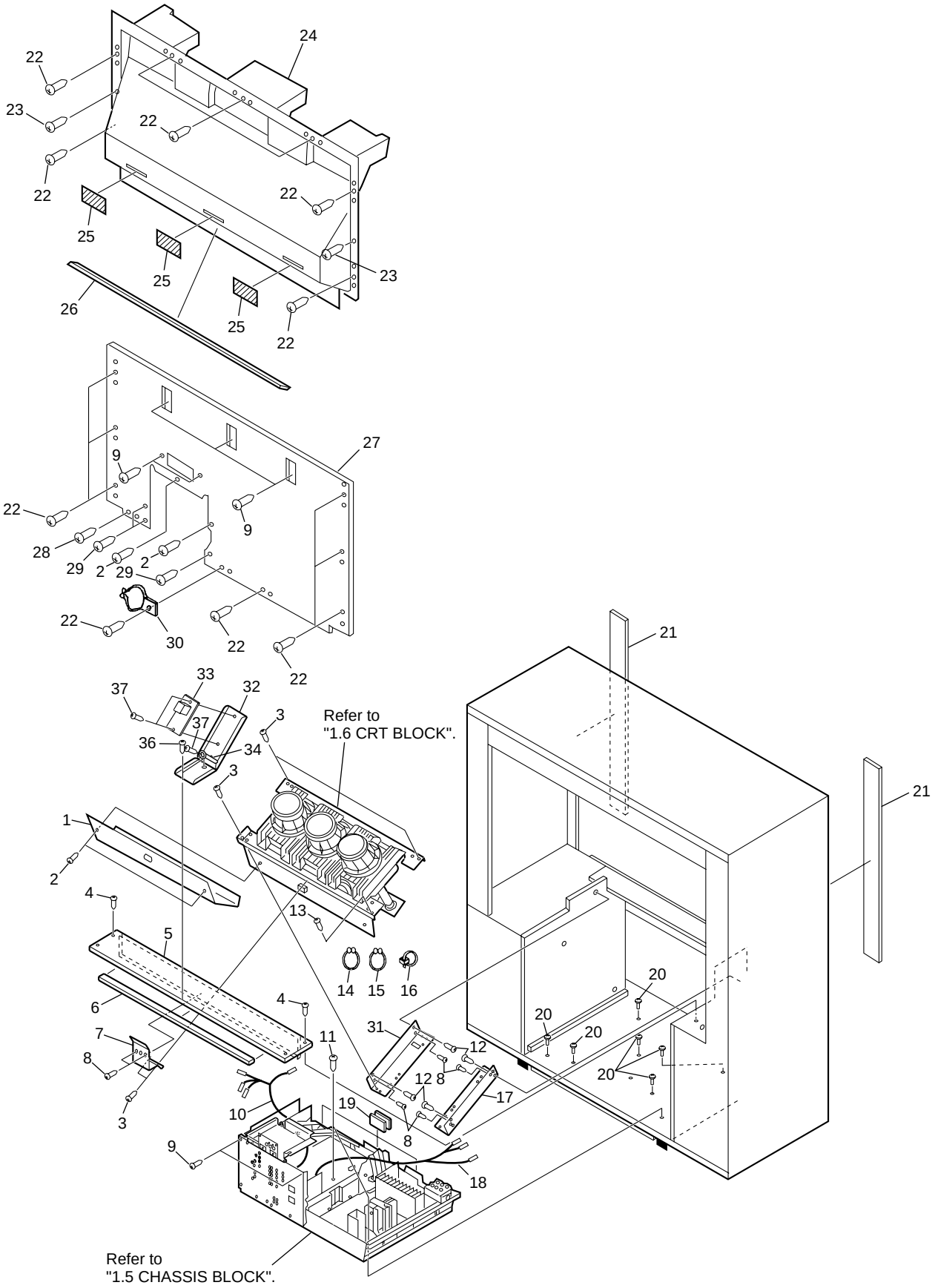
| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 1 | Lenticular Sheet 60 | See Contrast table (2) |
| | 2 | Almi. Frame (60) | See Contrast table (2) |
| | 3 | Fresnel (60PRO) | See Contrast table (2) |
| NSP | 4 | Upper Cabinet Metal | ANG2000 |
| NSP | 5 | Mirror Upper Stay L | ANG2004 |
| NSP | 6 | Mirror Upper Stay C | ANG2006 |
| NSP | 7 | Mirror Upper Stay R | ANG2005 |
| | 8 | Screw | BYC40P160FMC |
| NSP | 9 | Screen Side Fitting | ANG1993 |
| | 10 | Special Screw | ABA1240 |
| | 11 | Special Screw | ABA1244 |
| | 12 | Tweeter | APT1004 |
| | 13 | Cone Speaker | APV1021 |
| | 14 | Caster | AMR2547 |
| | 15 | Caster | See Contrast table (2) |
| | 16 | Special Screw | ABA1126 |
| NSP | 17 | CRT Front Holder | See Contrast table (2) |
| | 18 | M5 Screw | ABA1189 |
| NSP | 19 | Under Screen Metal B | ANG2009 |
| | 20 | Mirror Frame V | See Contrast table (2) |
| | 21 | Mirror (60A) | See Contrast table (2) |
| NSP | 22 | Upper Screen Metal B | ANG2002 |
| NSP | 23 | Under Screen Metal A | ANG2003 |
| | 24 | Frame Cushion P | AEC1634 |
| NSP | 25 | Upper Screen Metal A | ANG2001 |
| | 26 | Screen Frame Assy (60) | See Contrast table (2) |
| | 27 | Screw | BYC35P160FZK |
| | 28 | Washer | AEC1394 |
| | 29 | Mirror Frame H | See Contrast table (2) |
| | 30 | Screen Holder Low (60P) | See Contrast table (2) |
| | 31 | Spacer | AEC1769 |
| | 32 | Screen Spacer (60) | See Contrast table (2) |

## (2) CONTRAST TABLE

PRO-200/KUXC/CA and PRO-100/KUXC/CA are constructed the same except for the following :

| Mark | No. | Symbol and Description | | Part No. | | Remarks |
|---|---|---|---|---|---|---|
| | | PRO-200/KUXC/CA | PRO-100/KUXC/CA | PRO-200/KUXC/CA | PRO-100/KUXC/CA | |
| | 1 | Lenticular Sheet 60 | Lenticular Sheet 51 | AMR3084 | AMR3083 | |
| | 2 | Almi. Frame (60) | Almi. Frame (51) | ANG2287 | ANG2286 | |
| | 3 | Fresnel (60PRO) | Fresnel (51PRO) | AMR3086 | AMR3085 | |
| | 15 | Caster | Caster | Not used | AMR2863 | |
| NSP | 17 | CRT Front Holder | CRT Front Holder | ANG2120 | ANG2121 | |
| | 20 | Mirror Frame V | Mirror Frame V | ANG2007 | ANG2084 | |
| | 21 | Mirror (60A) | Mirror | AMR2739 | AMR2852 | |
| | 26 | Screen Frame Assy (60) | Screen Frame Assy (51) | AAP1515 | AAP1514 | |
| | 29 | Mirror Frame H | Mirror Frame H | ANG2008 | ANG2083 | |
| | 30 | Screen Holder Low (60P) | Screen Holder Low (51P) | AAP1590 | AAP1589 | |
| | 32 | Screen Spacer (60) | Screen Spacer (51) | AEC1768 | AEC1767 | |

## 1.4 REAR VIEW



## (1) REAR VIEW PARTS LIST

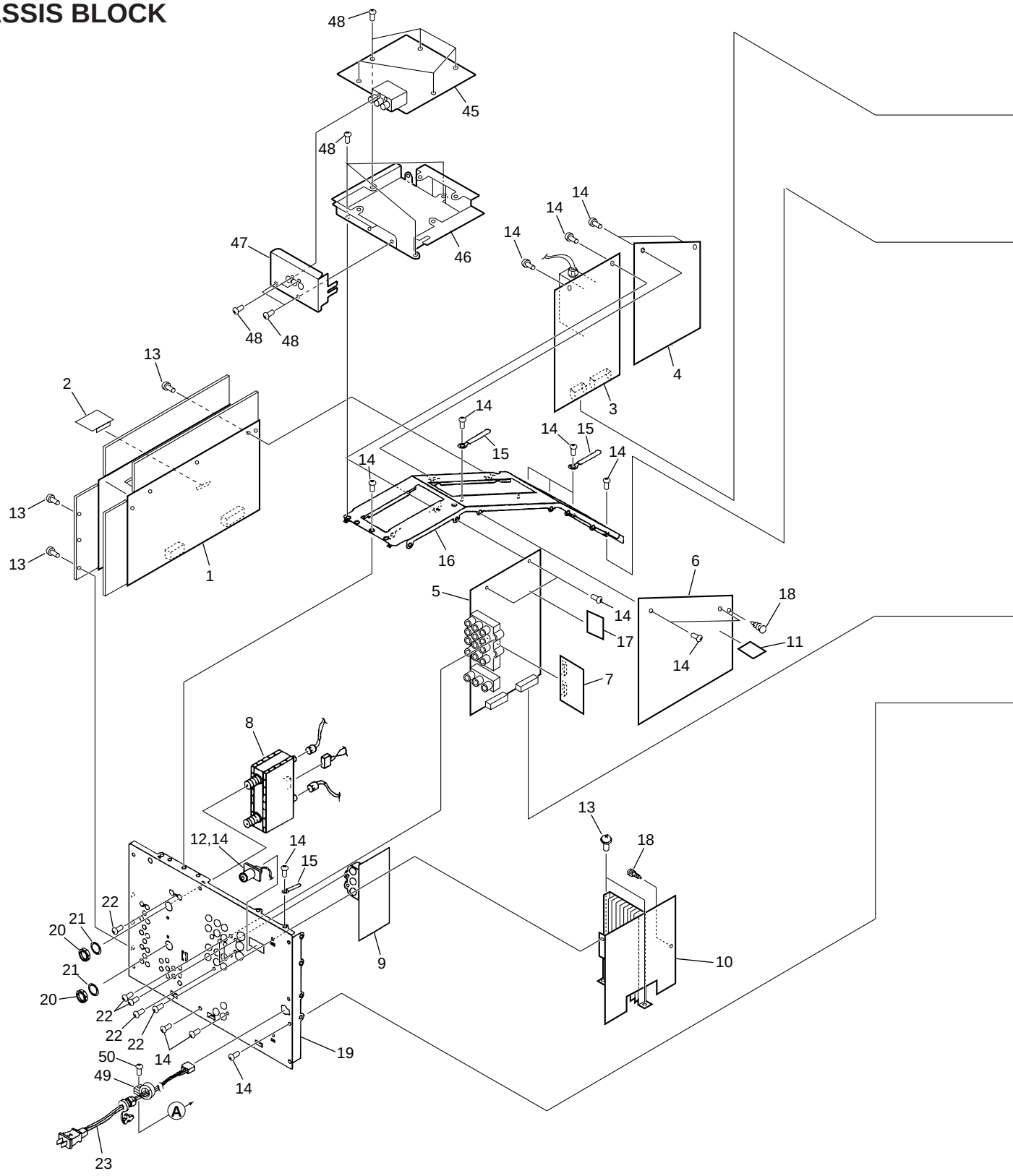
| Mark | No. | Description | Part No. |
|---|---|---|---|
| NSP | 1 | Tray (PLS) | AMR2563 |
| | 2 | Screw | ABZ30P120FZK |
| | 3 | Special Screw | ABA1244 |
| | 4 | Screw | ABA1124 |
| NSP | 5 | Back Cover Panel | See Contrast table (2) |
| | 6 | Back Cover Cushion | See Contrast table (2) |
| NSP | 7 | CRT Rear Holder | ANG2119 |
| | 8 | Special Screw | ABA1240 |
| | 9 | Screw | ABA1149 |
| | 10 | Wire Harness | ADX2458 |
| | 11 | Screw | BYC40P350FZK |
| | 12 | Screw | PMB50P200FZK |
| | 13 | Screw | ACZ40P080FMC |
| NSP | 14 | Purse Lock S | AEC1261 |
| | 15 | Purse Lock | AEC1540 |
| | 16 | Nylon Binder | AEC-093 |
| NSP | 17 | CRT Stand Holder (L) | ANA1516 |
| | 18 | 8P Housing Wire (J12) | ADX2257 |
| | 19 | Wire Holder | AMR2832 |
| | 20 | Special Screw | ABA1234 |
| | 21 | Screen Cushion 60 | See Contrast table (2) |
| | 22 | Screw | BYC35P160FZK |
| | 23 | Screw | PYC40T140FZB |
| | 24 | Mirror Case (51) | AME2296 |
| | 25 | Blind Sheet | AEC1622 |
| | 26 | Mirror Case Cushion | AEC1627 |
| | 27 | Rear Cover | AMM2893 |
| | 28 | Screw | BMZ40P100FZK |
| | 29 | Special Screw | ABA1235 |
| NSP | 30 | Cabinet Wire Holder | AEC1263 |
| NSP | 31 | CRT Stand Holder (R) | ANA1517 |
| NSP | 32 | IR Receiver Fixing Metal | ANG1958 |
| | 33 | IR RECEIVER Assy | AWZ6297 |
| | 34 | Binder | AEP-215 |
| | 35 | • • • • • | |
| | 36 | Screw | ABA1239 |
| | 37 | Screw | BBZ30P080FZK |

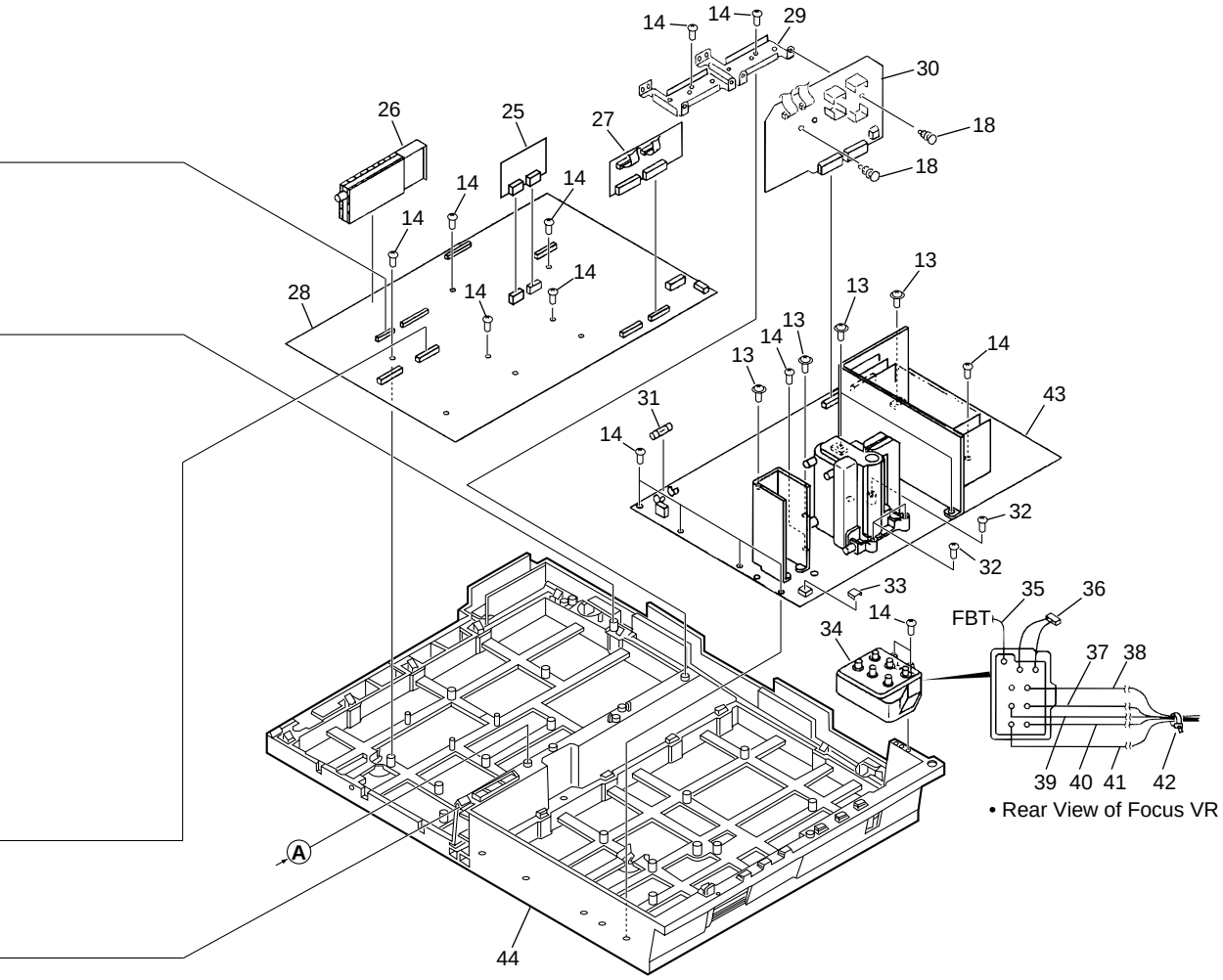
## (2) CONTRAST TABLE

PRO-200/KUXC/CA and PRO-100/KUXC/CA are constructed the same except for the following :

| Mark | No. | Symbol and Description | | Part No. | | Remarks |
|---|---|---|---|---|---|---|
| | | PRO-200/KUXC/CA | PRO-100/KUXC/CA | PRO-200/KUXC/CA | PRO-100/KUXC/CA | |
| NSP | 5 | Back Cover Panel | Back Cover Panel | AMM2664 | AMM2663 | |
| | 6 | Back Cover Cushion | Back Cover Cushion 60 | AEC1656 | AEC1626 | |
| | 21 | Screen Cushion 60 | Screen Cushion 51 | AEC1617 | AEC1612 | |

## 1.5 CHASSIS BLOCK





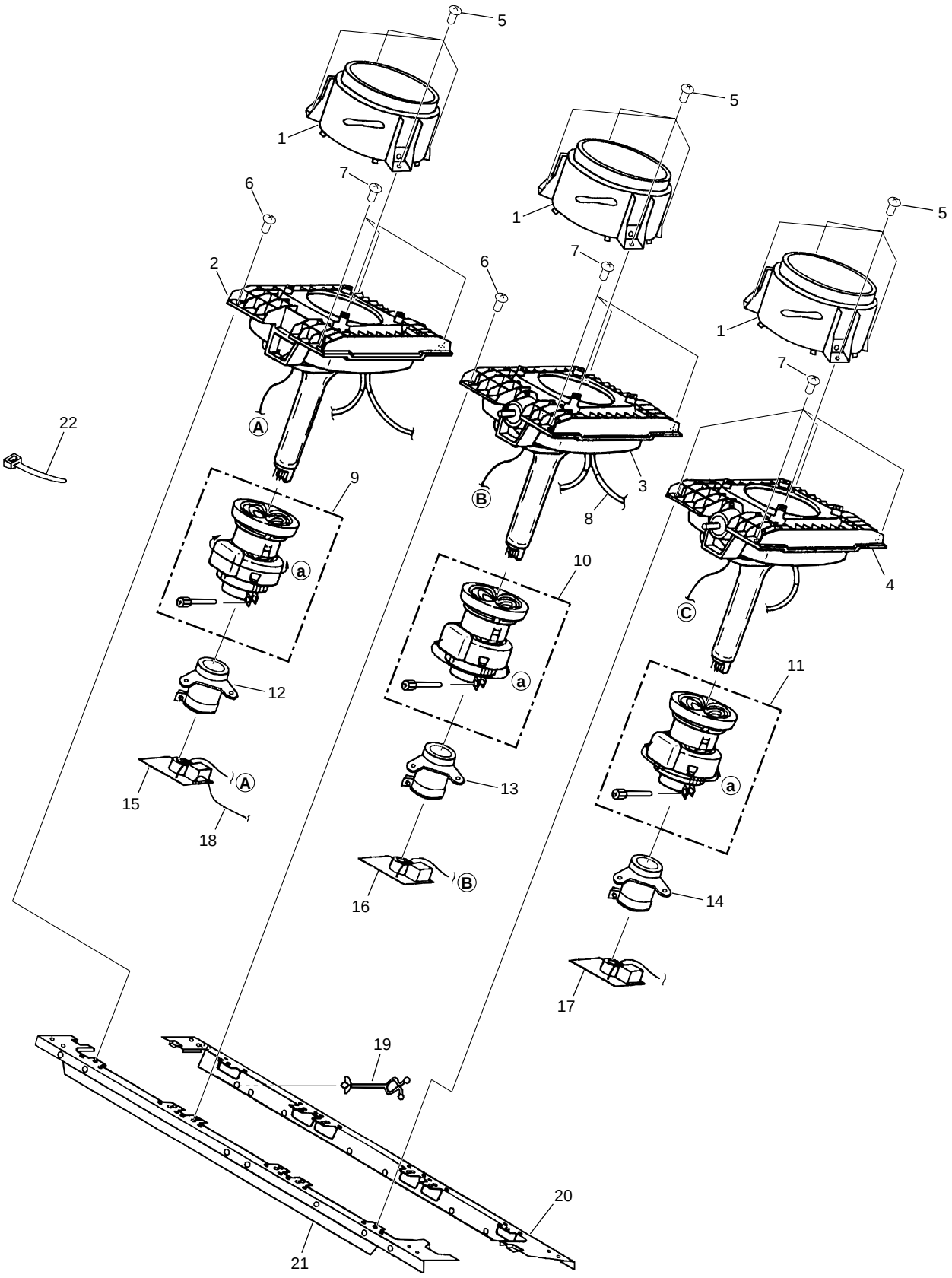

• Rear View of Focus VR

## ● CHASSIS BLOCK PARTS LIST

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 1 | CONVERGENCE Assy | AWZ6098 |
| | 2 | FULL CINEMA CONVER Assy | AWZ6108 |
| | 3 | TUNER 2 Assy | AWZ6296 |
| | 4 | 3D Y/C Assy | AWZ6117 |
| | 5 | AV I/O Assy | AWZ6320 |
| | 6 | P IN P Assy | AWZ6101 |
| | 7 | P IN P SELECTOR Assy | AWZ6120 |
| | 8 | RF Switch | AXF1088 |
| | 9 | Y/C SELECTOR Assy | AWZ6100 |
| | 10 | AUDIO Assy | AWZ6298 |
| | 11 | D CONNECTOR Assy | AWZ6119 |
| | 12 | BNC Cap | AMR2314 |
| | 13 | Screw | ABZ30P120FZK |
| | 14 | Screw | BBZ30P140FZK |
| | 15 | Binder | AEP-215 |
| NSP | 16 | PCB Frame | ANG2045 |
| | 17 | B CONNECTOR Assy | AWZ6103 |
| | 18 | Rivet | AEC-441 |
| | 19 | Rear Panel | ANC2311 |
| | 20 | Hexagonal Duct Nut | ABN-087 |
| | 21 | Bushing | AEC1661 |
| | 22 | Screw | BBZ30P100FZK |
| ⚠ | 23 | AC Power Cord | ADG1177 |
| | 24 | • • • • • | |
| | 25 | IQ SELECTOR Assy | AWZ6329 |

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 26 | TV Front End System Unit | AXF1084 |
| | 27 | A CONNECTOR Assy | AWZ6106 |
| | 28 | TUNER • VIDEO Assy | AWZ6330 |
| NSP | 29 | PCB Holder H | ANG2056 |
| | 30 | VM Assy | AWZ6105 |
| ⚠ | 31 | Fuse (FU102 : 500mA/125V) | AEK1010 |
| | 32 | Screw | VBZ30P200FMC |
| | 33 | Shield Case | ANK1510 |
| ⚠ | 34 | Focus VR (VR1) | ACX1096 |
| | 35 | 1P Lead Wire (J3) | ADX2231 |
| | 36 | 4P Housing Wire (J2) | ADX2230 |
| | 37 | 1P Lead Wire (J5) | ADX2233 |
| | 38 | 1P Lead Wire (J6) | ADX2236 |
| | 39 | 1P Lead Wire (J8) | ADX2238 |
| | 40 | 1P Lead Wire (J4) | ADX2232 |
| | 41 | 1P Lead Wire (J7) | ADX2237 |
| | 42 | Nylon Binder | AEC-093 |
| ☆ | 43 | POWER SUPPLY Assy | AWV1565 |
| NSP | 44 | Chassis | AMA1011 |
| | 45 | COMPONENT Assy | AWZ6300 |
| NSP | 46 | Sub Chassis | ANA1577 |
| | 47 | Sub Panel | ANC2310 |
| | 48 | Screw | BBZ30P080FZK |
| | 49 | Ferrite Core | ATX1033 |
| | 50 | Screw | ABZ30P160FZK |

## 1.6 CRT BLOCK



## (1) CRT BLOCK PARTS LIST

| Mark | No. | Description | Part No. |
|---|---|---|---|
| ☆ | 1 | Lens Assy | AMR2833 |
| ☆ | 2 | CRT Service Assy 60 (R) | See Contrast table (2) |
| ☆ | 3 | CRT Service Assy (G) | AWY1394 |
| ☆ | 4 | CRT ServiceAssy 60 (B) | See Contrast table (2) |
| | 5 | Special Screw | ABA1244 |
| | 6 | Screw | FBT40P120FZK |
| | 7 | Screw (Steel) | ABA1168 |
| ⚠ | 8 | Anode Cable (J1) | ADY1012 |
| ⚠ | 9 | Deflection Yoke (L1) | ATL1127 |
| ⚠ | 10 | Deflection Yoke (L2) | ATL1127 |
| ⚠ | 11 | Deflection Yoke (L3) | ATL1127 |
| ⚠ | 12 | VM Coil (L4) | ATL1123 |
| ⚠ | 13 | VM Coil (L5) | ATL1123 |
| ⚠ | 14 | VM Coil (L6) | ATL1123 |
| | 15 | R.CRT DRIVE Assy | AWZ6110 |
| | 16 | G.CRT DRIVE Assy | AWZ6111 |
| | 17 | B.CRT DRIVE Assy | AWZ6112 |
| ⚠ | 18 | VM Wire Harness (J13) | ADX2229 |
| NSP | 19 | Lead Clamper M | AEC1611 |
| NSP | 20 | CRT Rear Frame (60) | See Contrast table (2) |
| NSP | 21 | CRT Front Frame (60) | See Contrast table (2) |
| | 22 | Nyron Binder | AEC-093 |

## (2) CONTRAST TABLE

PRO-200/KUXC/CA and PRO-100/KUXC/CA are constructed the same except for the following :

| Mark | No. | Symbol and Description | | Part No. | | Remarks |
|---|---|---|---|---|---|---|
| | | PRO-200/KUXC/CA | PRO-100/KUXC/CA | PRO-200/KUXC/CA | PRO-100/KUXC/CA | |
| ☆ | 2 | CRT Service Assy 60 (R) | CRT Service Assy 51 (R) | AWY1406 | AWY1403 | |
| ☆ | 4 | CRT Service Assy 60 (B) | CRT Service Assy 51 (B) | AWY1407 | AWY1405 | |
| NSP | 20 | CRT Rear Frame (60) | CRT Rear Frame (51) | ANA1520 | ANA1518 | |
| NSP | 21 | CRT Front Frame (60) | CRT Front Frame (51) | ANA1515 | ANA1513 | |

# 2. CONTRAST OF MISCELLANEOUS PARTS

*NOTES:* ●*Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
●*The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*
*Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).*
*560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J*
*47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J*
*0.5 Ω → R50 ..... RN2H R 5 0 K*
*1 Ω → 1R0 ..... RS1P 1 R 0 K*
*Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).*
*5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F*
●*Parts marked by ☆ are important parts which relate in X-rays radiation. If any of these parts need to be replaced, always replace with specified parts.*
●*Parts marked by × are important parts which relate in X-rays radiation. If a failure occurs in any of these parts, replace the printed circuit board assembly where the relevant part has already been adjusted as a working component. Do not replace the actual part itself. If any part marked by × is replaced, there is danger of being exposed to X-rays.*

## ■ PCB ASSY

PRO-200/KUXC/CA, PRO-100/KUXC/CA, PRO-119/KUXC and PRO-99/KUXC are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | Remarks |
|---|---|---|---|---|
| | | PRO-119/KUXC, PRO-99/KUXC | PRO-200/KUXC/CA, PRO-100/KUXC/CA | |
| | TUNER • VIDEO ASSY | AWV1559 | Not used | |
| NSP | ├ VIDEO BLOCK | A1V1559 | Not used | |
| NSP | ├ UCOM BLOCK | A2V1559 | Not used | |
| NSP | ├ TUNER BLOCK | A3V1559 | Not used | |
| NSP | └ PRE-AUDIO BLOCK | A4V1559 | Not used | |
| NSP | TUNER • VIDEO ASSY | Not used | AWV1705 | |
| | ├ TUNER • VIDEO ASSY | Not used | AWZ6330 | |
| NSP | │ ├ VIDEO BLOCK | Not used | A1Z6330 | |
| NSP | │ ├ UCOM BLOCK | Not used | A2Z6303 | |
| NSP | │ ├ TUNER BLOCK | Not used | A3Z6303 | |
| NSP | │ └ PRE-AUDIO BLOCK | Not used | A4Z6303 | |
| | └ IR RECEIVER ASSY | Not used | AWZ6297 | |
| NSP | AV I/O ASSY | AWV1560 | (∗1) AWV1677 | (∗2) [ or AWV1701 ] |
| | └ AV I/O ASSY | AWZ6099 | AWZ6295 | [ AWZ6320 ] |
| | └ AV I/O BLOCK | A1Z6099 | A1Z6295 | [ A1Z6320 ] |
| NSP | P IN P ASSY | AWV1561 | AWV1678 | |
| | └ EXT SP ASSY | AWZ6102 | Not used | |
| NSP | TUNER 2 • ISC ASSY | AWV1562 | Not used | |
| | ├ ISC ASSY | AWZ6104 | Not used | |
| NSP | │ ├ TUNER 2 BLOCK | A1Z6104 | Not used | |
| NSP | │ └ ISC BLOCK | A2Z6104 | Not used | |
| | └ FULL CINEMA MUTE ASSY | AWZ6107 | Not used | |
| NSP | TUNER 2 ASSY | Not used | AWV1679 | |
| | └ TUNER 2 ASSY | Not used | AWZ6296 | |
| NSP | ├ TUNER 2 BLOCK | Not used | A1Z6104 | |
| NSP | └ SR BLOCK | Not used | A2Z6296 | |
| NSP | AUDIO ASSY | AWV1563 | AWV1680 | |
| | ├ AUDIO ASSY | AWZ6109 | AWZ6298 | |
| | ├ FRONT CONTROL ASSY | AWZ6113 | AWZ6299 | |
| | ├ IR RECEIVER ASSY | AWZ6115 | Not used | |
| | └ SUB RECEIVER ASSY | AWZ6116 | Not used | |
| | ├ RECEIVER ELEMENT ASSY | AWZ6073 | Not used | |
| | └ RECEIVER CIRCUIT ASSY | AWZ6074 | Not used | |
| NSP | COMPONENT ASSY | Not used | AWV1704 | |
| | ├ COMPONENT ASSY | Not used | AWZ6300 | |
| | └ IQ SELECTOR ASSY | Not used | AWZ6329 | |
| | ├ FULL SINEMA MUTE BLOCK | Not used | A1Z6301 | |
| | └ IQ SELECTOR BLOCK | Not used | A2Z6329 | |

# ■ TUNER•VIDEO ASSY

## ● TUNER BLOCK

A3Z6303 and A3V1559 are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | Remarks |
|---|---|---|---|---|
| | | A3V1559 | A3Z6303 | |
| | Q1201,Q1301 | XDC124ES | DTC124ES | |

## ● PRE-AUDIO BLOCK

A4Z6303 and A4V1559 are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | Remarks |
|---|---|---|---|---|
| | | A4V1559 | A4Z6303 | |
| | CN1351 (2P PIN JACK) | AKB1151 | AKB1265 | |
| | CN1353 (1P PIN JACK) | AKB1111 | AKB1267 | |

Note :
A table isn't inserted because there is much difference from PRO-119 in VIDEO Block (A1Z6330) and UCOM Block (A2Z6303) of PRO-200 and PRO-100.
Refer to the "PCB PARTS LIST".

# ■ AV I/O ASSY

## ● AV I/O BLOCK (∗1)

A1Z6295 and A1Z6099 are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | Remarks |
|---|---|---|---|---|
| | | A1Z6099 | A1Z6295 | |
| | Q1526 | Not used | 2SC1740S | |
| | D1508 | Not used | HSS104-02 | |
| | R1532,R1549 | Not used | RD1/4PU473J | |
| | CN1501 (3P PIN JACK) | AKB1137 | AKB1264 | |
| | CN1502 (12P PIN JACK) | AKB1114 | AKB1263 | |

## ● AV I/O BLOCK (∗2)

A1Z6320 and A1Z6099 are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | Remarks |
|---|---|---|---|---|
| | | A1Z6099 | A1Z6320 | |
| | CN1501 (3P PIN JACK) | AKB1137 | AKB1264 | |
| | CN1502 (12P PIN JACK) | AKB1114 | AKB1263 | |

# ■ PCB PARTS LIST

## AF TUNER • VIDEO ASSY

### SEMICONDUCTORS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | | IC804 | AT24C08-10PC |
| | | IC1301 | CXA1734S |
| | | IC403 | MC14011BCP |
| | | IC1353 | MC14066BCP |
| | | IC802 | MC34064P |
| | | IC1203 | NJM7809FA |
| | | IC402 | PA0030 |
| | | IC801 | PD5473B |
| | | IC401 | TA8845BN |
| | | IC803 | TC4094BP |
| | | IC1351 | UPC1853CT-01 |
| | | Q1202,Q1206,Q1208,Q1213,Q1302 | 2SA933S |
| | | Q1351,Q1352,Q1357-Q1359 | 2SA933S |
| | | Q403,Q404,Q406,Q409-Q411 | 2SA933S |
| | | Q416-Q418,Q423-Q426,Q444 | 2SA933S |
| | | Q447,Q801,Q805,Q812,Q821 | 2SA933S |
| | | Q823-Q827,Q832 | 2SA933S |
| | | Q1204,Q1205,Q1207,Q1209-Q1211 | 2SC1740S |
| | | Q1303,Q1304,Q1354-Q1356 | 2SC1740S |
| | | Q1360-Q1363,Q1366,Q401,Q402 | 2SC1740S |
| | | Q405,Q407,Q408,Q412-Q415 | 2SC1740S |
| | | Q419-Q421,Q427-Q442 | 2SC1740S |
| | | Q445,Q446,Q450-Q453 | 2SC1740S |
| | | Q802,Q803,Q806-Q809 | 2SC1740S |
| | | Q813,Q814,Q816,Q817 | 2SC1740S |
| | | Q819,Q820,Q822 | 2SC1740S |
| | | Q422 | 2SC2235 |
| | | Q1212 | 2SC2878 |
| | | Q1203,Q804 | 2SD880 |
| | | Q818 | 2SJ460 |
| | | Q443 | 2SK117 |
| | | Q1201,Q1301 | DTC124ES |
| | | D488,D489 | 1SS244 |
| | | D1207-D1211,D1352,D1353 | HSS104-02 |
| | | D1355-D1366,D402-D404 | HSS104-02 |
| | | D411-D413,D426-D432 | HSS104-02 |
| | | D435,D436,D439,D440 | HSS104-02 |
| | | D443,D444,D448,D455,D456 | HSS104-02 |
| | | D462,D464-D466,D468 | HSS104-02 |
| | | D471-D474,D476-D479 | HSS104-02 |
| | | D482,D483,D487,D490,D491 | HSS104-02 |
| | | D801,D802,D804,D805 | HSS104-02 |
| | | D807-D809,D811,D812 | HSS104-02 |
| | | D816-D818,D867-D871,D873 | HSS104-02 |
| | | D889,D891 | HSS104-02 |
| | | D408 | HZS9C3L |
| | | D441 | MA723 |
| | | D1301,D1302,D409,D410 | MTZJ15 |
| | | D415,D416,D420-D424 | MTZJ15 |
| | | D437,D438,D442,D445-D447 | MTZJ15 |
| | | D449-D454,D457-D461,D463 | MTZJ15 |
| | | D467,D469,D470,D475,D831 | MTZJ15 |
| | | D843,D845,D847 | MTZJ15 |
| | | D803 | MTZJ5.1B |
| | | D1201,D1204,D414,D806,D810 | MTZJ6.8 |

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | | D813,D819-D830,D832-D842 | MTZJ6.8 |
| | | D844,D846,D848-D866,D872 | MTZJ6.8 |
| | | D878-D884 | MTZJ6.8 |
| | | D401 | RD2.2ESB1 |
| | | D1203 | RD33ESB3 |
| | | D1354 | RD4.3ESB3 |
| | | D1351 | RD4.7ESB3 |
| | | D1202 | RD5.6ESB3 |
| | | D405-D407,D417-D419,D425 | S5688G |
| | | D433,D434 | S5688G |

## COILS

| | | | |
|---|---|---|---|
| | L416 | LINE FILTER | ATF-163 |
| | L417 | COIL | ATH1046 |
| | | L407,L412 | LAU100J |
| | | L409 | LAU101J |
| | | L410 | LAU150J |
| | | L1201-L1203,L1301,L802-L805 | LAU2R2K |
| | | L408 | LAU390K |
| | | L411 | LAU3R9J |
| | | L401-L403 | LAU4R7J |
| | | L404,L405 | LAU560J |
| | | L801 | LAU8R2K |

## CAPACITORS

| | | | |
|---|---|---|---|
| | | C1311 (3.3µF/DC50V) | ACH1128 |
| | | C1304 (10µF/DC50V) | ACH1129 |
| | | TC801 CERAMIC TRIMMER | ACM-020 |
| | | C403 | CCCCH100D50 |
| | | C831 | CCCCH101J50 |
| | | C426,C428,C429 | CCCCH121J50 |
| | | C425,C427,C441,C475,C478 | CCCCH151J50 |
| | | C477,C844 | CCCCH820J50 |
| | | C452 | CCCSL100D50 |
| | | C1208,C463,C832,C833 | CCCSL101J50 |
| | | C1252,C453,C468,C470 | CCCSL121J50 |
| | | C451 | CCCSL180J50 |
| | | C814,C829,C830 | CCCSL221J50 |
| | | C817 | CCCSL270J50 |
| | | C442,C443,C450 | CCCSL330J50 |
| | | C455 | CCCSL390J50 |
| | | C1210,C847-C850 | CCCSL470J50 |
| | | C480 | CCCSL560J50 |
| | | C469,C471 | CCCSL680J50 |
| | | C1390 | CEANP100M50 |
| | | C1213,C432,C456,C457,C460 | CEAS100M50 |
| | | C467,C811 | CEAS100M50 |
| | | C449,C827,C839 | CEAS101M10 |
| | | C408,C420,C458 | CEAS101M25 |
| | | C465,C482 | CEAS102M16 |
| | | C806 | CEAS102M35 |
| | | C1305,C1310,C1360,C410,C412 | CEAS1R0M50 |
| | | C418,C419,C431,C804,C810 | CEAS1R0M50 |
| | | C820-C823,C835,C840 | CEAS1R0M50 |
| | | C1215,C1385 | CEAS220M50 |
| | | C1356,C1359,C1370-C1373 | CEAS2R2M50 |
| | | C1387-C1389,C406,C407,C413 | CEAS2R2M50 |
| | | C472 | CEAS2R2M50 |
| | | C854 | CEAS330M35 |
| | | C1374 | CEAS331M16 |
| | | C1364,C1366 | CEAS3R3M50 |
| | | C1221,C1369,C1376,C1379 | CEAS470M25 |
| | | C415,C416,C423,C430,C435 | CEAS470M25 |
| | | C454,C473,C819,C846,C851 | CEAS470M25 |
| | | C855 | CEAS470M25 |
| | | C424 | CEAS471M10 |
| | | C1217 | CEAS471M16 |
| | | C1307,C1316,C1319,C1320,C1322 | CEAS4R7M50 |
| | | C417,C462 | CEAS4R7M50 |
| | | C812,C837 | CEASR10M50 |
| | | C826 | CEASR22M50 |
| | | C1312,C434 | CEASR47M50 |
| | | C1204,C1212,C1303 | CEHAQ100M50 |
| | | C1205,C808 | CEHAQ101M10 |
| | | C1247,C1251,C1318 | CEHAQ101M25 |
| | | C807 | CEHAQ1R0M50 |
| | | C1245,C1249 | CEHAQ331M16 |
| | | C1203,C1220 | CEHAQ470M25 |
| | | C1206 | CEHAQ471M16 |
| | | C1301,C1306,C1315,C1317 | CEHAQ4R7M50 |
| | | C1308 | CFTXA224J50 |
| | | C1211,C440,C825,C838 | CKCYB102K50 |
| | | C479 | CKCYB103K50 |
| | | C1365,C1367 | CKCYB152K50 |
| | | C1302,C1309 | CKCYB222K50 |
| | | C1253 | CKCYB391K50 |
| | | C843 | CKCYB471K50 |
| | | C405 | CKCYB472K50 |
| | | C815 | CKCYB561K50 |
| | | C1201,C1202,C1207,C1216,C1224 | CKCYF103Z50 |
| | | C1246,C1248,C1321,C1357,C409 | CKCYF103Z50 |
| | | C421,C436-C439,C802,C803 | CKCYF103Z50 |
| | | C805,C809,C813,C818,C828 | CKCYF103Z50 |
| | | C834,C842,C845,C852 | CKCYF103Z50 |
| | | C1368,C1375,C1377,C433,C459 | CKCYF473Z50 |
| | | C466,C474,C483,C816 | CKCYF473Z50 |
| | | C1386,C841 | CQMA102J50 |
| | | C402 | CQMA103J50 |
| | | C1352,C1361,C1363,C401,C422 | CQMA104J50 |
| | | C461,C801 | CQMA104J50 |
| | | C411 | CQMA123J50 |
| | | C404 | CQMA183J50 |
| | | C1353 | CQMA222J50 |
| | | C1355,C1358 | CQMA223J50 |
| | | C1314 | CQMA272J50 |
| | | C414 | CQMA392J50 |
| | | C1313 | CQMA473J50 |
| | | C1354,C476 | CQMA681J50 |
| | | C1362,C1378 | CQMA682J50 |
| | | C444,C445 | CQMA683J50 |
| | | C1351 | CQMA823J50 |

## RESISTORS

| | | | |
|---|---|---|---|
| | | R1389 | RD1/2LMF330J |
| | | R464,R465,R470-R472 | RD1/2PM100J |
| | | R466 | RD1/2PM120J |
| | | R515 | RD1/2PM221J |
| | | R1206,R468,R469,R474 | RD1/2PM271J |
| | | R1207,R1209 | RD1/2PM681J |
| | | R679 | RD1/2PM6R8J |
| | | R809,R958,R959 | RD1/4LMF3R9J |
| | | R1305 | RN1/4PC4302F |
| | | R1307 | RN1/4PC6202F |

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | R458 | | RS1MMF220J |
| | R1353 | | RS1MMF470J |
| | R1259 | | RS2LMF1R0J |
| | R641 | | RS2LMF4R7J |
| | R1205,R1261 | | RS2MMF220J |
| | R830 | | RS3LMF100J |
| | VR1201 (4.7kΩ) | | ACP1042 |
| | VR801 | | VRTS6VS153 |
| | Other Resistors | | RD1/4PU□□□J |

### OTHERS

| | | | |
|---|---|---|---|
| | 1203,1204 | COAXIAL CABLE | ADE-082 |
| | J1203 | 3P HOUSING WIRE | ADX2240 |
| | CN1351 | 2P PIN JACK | AKB1265 |
| | CN1353 | 1P PIN JACK | AKB1267 |
| | 1205 | HEAT SINK | ANH-880 |
| | X801 | CERAMIC RESONATOR | ASS1015 |
| | X402 | CERAMIC RESONATOR | ASS1019 |
| | X401 | CRYSTAL RESONATOR | ASS1091 |
| | CN405 | 10P PLUG | KM200IA10 |
| | CN406 | 15P PLUG | KM200IA15 |
| | CN404 | 19P PLUG | KM200IA19 |
| | CN805 | 7P PLUG | KM200IA7 |
| | CN801 | 8P PLUG | KM250MA8B |
| | CN804 | 8P PLUG | KM250MA8R |
| | CN401 | 9P PLUG | KM250MA9R |
| | CN802 | 10P SOCKET | KP250NA10 |
| | CN809 | 12P SOCKET | KP250NA12 |
| | CN1202,CN803 | 15P SOCKET | KP250NA15 |
| | CN808 | 3P SOCKET | KP250NA3 |
| | CN811,CN814 | 4P SOCKET | KP250NA4 |
| | CN1355,CN813 | 5P SOCKET | KP250NA5 |
| | CN1354 | 7P SOCKET | KP250NA7 |
| | CN1203,CN403,CN807 | 8P SOCKET | KP250NA8 |
| | CN402 | 9P SOCKET | KP250NA9 |
| | 1201 | TV FRONT END SYSTEM UNIT | AXF1084 |
| | DL406 | DELAY LINE | ATN1014 |

## HF FRONT CONTROL ASSY

### SEMICONDUCTORS

| | | |
|---|---|---|
| | IC3881 | PD5136 |
| | Q3881 | 2SA933S |
| | Q3882 | 2SC1740S |
| | D3882 | AEL1152 |
| | D3881,D3883,D3885,D3886 | HSS104-02 |
| | D3884 | MTZJ3.0 |
| | PC3881 | P1241-09 |

### SWITCHES

| | | |
|---|---|---|
| | S3881-S3892 | ASG1034 |

### CAPACITORS

| | | |
|---|---|---|
| | C3884,C3885 | CCDSL221J50 |
| | C3881 | CEJA100M35 |
| | C3886 | CEJA2R2M50 |
| | C3882 | CEJA330M25 |
| | C3883 | CFTXA104J50 |
| | C3888 | CKCYB472K50 |
| | C3887 | CKCYF473Z50 |

| Mark | No. | Description | Part No. |
|---|---|---|---|

### RESISTORS

| | | |
|---|---|---|
| | R3886 | RD1/2PM561J |
| | R3887 | RD1/2PMF820J |
| | VR3901 (47kΩ) | ACP1045 |
| | Other Resistors | RD1/4PU□□□J |

### OTHERS

| | | | |
|---|---|---|---|
| | 3881 | LED HOLDER | AMR1733 |
| | X3881 | CERAMIC RESONATOR | ASS1043 |
| | CN3881 | 5P PLUG | KM250MA5 |

## KF TUNER2 ASSY

### SEMICONDUCTORS

| | | |
|---|---|---|
| | Q2105,Q2107,Q2109,Q2214 | 2SA1162 |
| | Q2102 | 2SC1740S |
| | Q2101 | 2SC2235 |
| | Q2103,Q2104,Q2106,Q2108,Q2207 | 2SC2712 |
| | Q2209,Q2210 | 2SC2712 |
| | D2104,D2105 | 1SS226 |
| | D2212,D2214,D2217,D2225 | 1SS352 |
| | D2102 | RD33MB |
| | D2101 | RD5.6MB |
| | D2226 | RD6.8MB |

### COILS

| | | |
|---|---|---|
| | L2101-L2103 | LAU2R2K |

### CAPACITORS

| | | |
|---|---|---|
| | C2120 | CCSQSL121J50 |
| | C2121 | CCSQSL391J50 |
| | C2114 | CCSQSL470J50 |
| | C2102,C2105,C2106 | CEHAQ100M50 |
| | C2103 | CEHAQ101M10 |
| | C2109,C2119 | CEHAQ331M16 |
| | C2101,C2107,C2108,C2212 | CEHAQ470M25 |
| | C2104,C2118 | CEHAQ471M16 |
| | C2115 | CKSQYF102Z50 |
| | C2110-C2113,C2116,C2117,C2213 | CKSQYF103Z50 |
| | C2221 | CKSQYF103Z50 |
| | C2220 | CKSQYF222Z50 |

### RESISTORS

| | | |
|---|---|---|
| | R2102 | RD1/2PM271J |
| | R2103,R2104 | RD1/2PM681J |
| | R2126 | RD1/4PU562J |
| | R2101 | RS2MMF220J |
| | VR2101 (2.2kΩ) | ACP1041 |
| | Other Resistors | RS1/10S□□□J |

### OTHERS

| | | | |
|---|---|---|---|
| | CN2206 | 2P MINI JACK | AKN1061 |
| | CN2203 | 12P PLUG | KM250NA12L |
| | CN2201 | 3P PLUG | KM250NA3L |
| | CN2101 | 8P PLUG | KM250NA8L |

## QF AUDIO ASSY

### SEMICONDUCTORS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | IC2901 | | LA4280-P |
| | Q2903 | | 2SA933S |
| | Q2902,Q2904 | | 2SC1740S |
| | Q2901 | | 2SD1276A |
| | D2922 | | BR3371XJ30A |
| | D2902-D2904,D2906,D2908-D2921 | | HSS104-02 |
| | D2927 | | HSS104-02 |
| | D2905,D2907 | | MTZJ6.8 |
| | D2931 | | RD2.0ESB |
| | D2901 | | RD5.6ESB3 |
| | D2928 | | RD9.1ESB3 |

### COILS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | L2903 | LINE FILTER | ATF-163 |
| | L2901,L2902 | | ATH-133 |

### CAPACITORS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | C2923,C2924 (3.3µF/DC63V) | | ACH1127 |
| | C2906,C2913 | | CCCSL151J50 |
| | C2908,C2911 | | CEHAQ100M50 |
| | C2909 | | CEHAQ101M25 |
| | C2940 | | CEHAQ220M50 |
| | C2922 | | CEHAQ221M10 |
| | C2920,C2921 | | CEHAQ222M35 |
| | C2907,C2910 | | CEHAQ330M50 |
| | C2925 | | CEHAQ470M25 |
| | C2901,C2905 | | CEHAQ471M50 |
| | C2912,C2917 | | CKCYB102K50 |
| | C2936,C2937 | | CKCYB471K50 |
| | C2902 | | CKCYB561K50 |
| | C2903,C2926 | | CKCYF103Z50 |
| | C2914-C2916 | | CKCYF473Z50 |
| | C2918,C2919 | | CQMA124J50 |

### RESISTORS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | R2921,R2923 | | RD1/2PM152J |
| | R2916,R2917 | | RD1/4LMF100J |
| | R2912,R2914 | | RD1/4LMF2R2J |
| | R2904 | | RN1/4PC2702F |
| | R2903 | | RN1/4PC6201F |
| | R2951 | | RS3LMF151J |
| | R2950 | | RT10PZ4R7K |
| | Other Resistors | | RD1/4PU□□□J |

### OTHERS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 2911 | PLATE SPRING | ANG1569 |
| | 2902 | HEAT SINK | ANH-880 |
| | CN2902 | 8P PLUG | KM250MA8 |
| | CN2903 | 5P PLUG | KM250NA5L |
| | CN2904 | 7P PLUG | KM250NA7L |

## SF IQ SELECTOR ASSY

### SEMICONDUCTORS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | IC2003,IC2004 | | MC14066BF |
| | IC2009 | | TC4013BF |
| | IC2002 | | TC74HC04AF |
| | IC2001 | | TC74HC4040AF |
| | IC2005 | | TC74HC4538AF |
| | Q2001 | | 2SA1162 |
| | Q2002,Q2004-Q2011 | | 2SC2712 |
| | D2038-D2041 | | 1SS226 |
| | D2005-D2010,D2012-D2018 | | 1SS352 |
| | D2020-D2022,D2024-D2034 | | 1SS352 |
| | D2036,D2037 | | 1SS352 |
| | D2001-D2004,D2023,D2035 | | RD6.8MB |

### CAPACITORS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | C2005 | | CCSQCH151J50 |
| | C2002,C2004,C2007,C2011,C2015 | | CEAT470M25 |
| | C2001,C2003,C2006,C2010,C2016 | | CKCYF473Z50 |
| | C2008 | | CQMA471J50 |
| | C2009 | | CQPA362J2A |

### RESISTORS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | R2037 | | RD1/2LMF3R9J |
| | R2007 | | RN1/16SE1202D |
| | R2033 | | RS1/16S100J |
| | R2015,R2021,R2022,R2041,R2043 | | RS1/16S101J |
| | R2045,R2047,R2052-R2062 | | RS1/16S101J |
| | R2001,R2002,R2004,R2005 | | RS1/16S102J |
| | R2009,R2010,R2012-R2014,R2018 | | RS1/16S102J |
| | R2020,R2032,R2040,R2063,R2064 | | RS1/16S102J |
| | R2023,R2028-R2030,R2034,R2051 | | RS1/16S103J |
| | R2016 | | RS1/16S153J |
| | R2019 | | RS1/16S183J |
| | R2038,R2039 | | RS1/16S221J |
| | R2024,R2027,R2035,R2036 | | RS1/16S222J |
| | R2049,R2050 | | RS1/16S223J |
| | R2006,R2008,R2011 | | RS1/16S272J |
| | R2017 | | RS1/16S333J |
| | R2025 | | RS1/16S471J |
| | R2026,R2031,R2042,R2044,R2046 | | RS1/16S472J |
| | R2048 | | RS1/16S472J |
| | R2003 | | RS1/16S513J |
| | VR2001 (100kΩ) | | ACP1046 |
| | VR2002 | | VRTS6VS103 |

### OTHERS

| Mark | No. | Description | Part No. |
|---|---|---|---|
| | 2003 | CABLE HOLDER | AKT1011 |
| | CN2002 | 15P SOCKET | KP200IA15L |
| | CN2001 | 7P SOCKET | KP200IA7L |

| Mark | No. | Description | Part No. |
|---|---|---|---|

## AB F IR RECEIVER ASSY

### CAPACITORS

| | | |
|---|---|---|
| | C9002 | CCCSL121J50 |
| | C9001 | CEAS101M10 |

### RESISTORS

| | | |
|---|---|---|
| | All Resistors | RD1/4PU□□□J |

### OTHERS

| | | |
|---|---|---|
| | CN9001 3P PLUG | KM250MA3 |
| | REMOTE RECEIVER UNIT | GP1U28X |

## AC F COMPONENT ASSY

### SEMICONDUCTORS

| | | |
|---|---|---|
| | IC7001 | AN5867K |
| | IC7004 | BA7655AF |
| | IC7003 | CXA1315M |
| | IC7002 | NJM7809FA |
| | Q7003,Q7013,Q7014,Q7024,Q7025 | 2SA1162 |
| | Q7027-Q7030,Q7032,Q7033 | 2SA1162 |
| | Q7001,Q7002,Q7004-Q7012 | 2SC2712 |
| | Q7015-Q7023,Q7026,Q7031,Q7034 | 2SC2712 |
| | D7018,D7019 | 1SS226 |
| | D7001-D7017 | 1SS352 |
| | D7023 | RD5.1MB |
| | D7022 | RD7.5MB |

### CAPACITORS

| | | |
|---|---|---|
| | C7034 | CCSQCH470J50 |
| | C7010,C7011,C7016,C7027,C7028 | CEAT100M50 |
| | C7032,C7033,C7035,C7037 | CEAT100M50 |
| | C7021,C7023,C7026 | CEAT101M10 |
| | C7022 | CEAT101M25 |
| | C7001-C7006,C7015,C7019,C7020 | CEAT470M25 |
| | C7031 | CEAT470M25 |
| | C7024 | CEAT4R7M50 |
| | C7008,C7009,C7012-C7014 | CEATR10M50 |
| | C7007,C7017,C7018,C7025 | CKSQYF473Z50 |
| | C7029,C7030,C7036 | CKSQYF473Z50 |

### RESISTORS

| | | |
|---|---|---|
| | R7003 | RN1/16SE1501D |
| | R7008,R7016,R7021,R7026 | RN1/16SE2201D |
| | R7009 | RN1/16SE3301D |
| | R7113,R7116,R7133 | RS1/16S0R0J |
| | R7002,R7004,R7011,R7015,R7017 | RS1/16S101J |
| | R7023,R7030,R7032-R7038,R7040 | RS1/16S101J |
| | R7044,R7052,R7053,R7056,R7057 | RS1/16S101J |
| | R7069,R7079,R7080,R7083 | RS1/16S101J |
| | R7091-R7093,R7102-R7107 | RS1/16S101J |
| | R7109-R7112,R7117,R7124,R7127 | RS1/16S101J |
| | R7132,R7135 | RS1/16S101J |
| | R7039,R7046,R7050,R7051,R7085 | RS1/16S102J |
| | R7089,R7090 | RS1/16S102J |
| | R7013,R7025,R7041,R7042,R7072 | RS1/16S103J |
| | R7076,R7077,R7094-R7096,R7099 | RS1/16S103J |

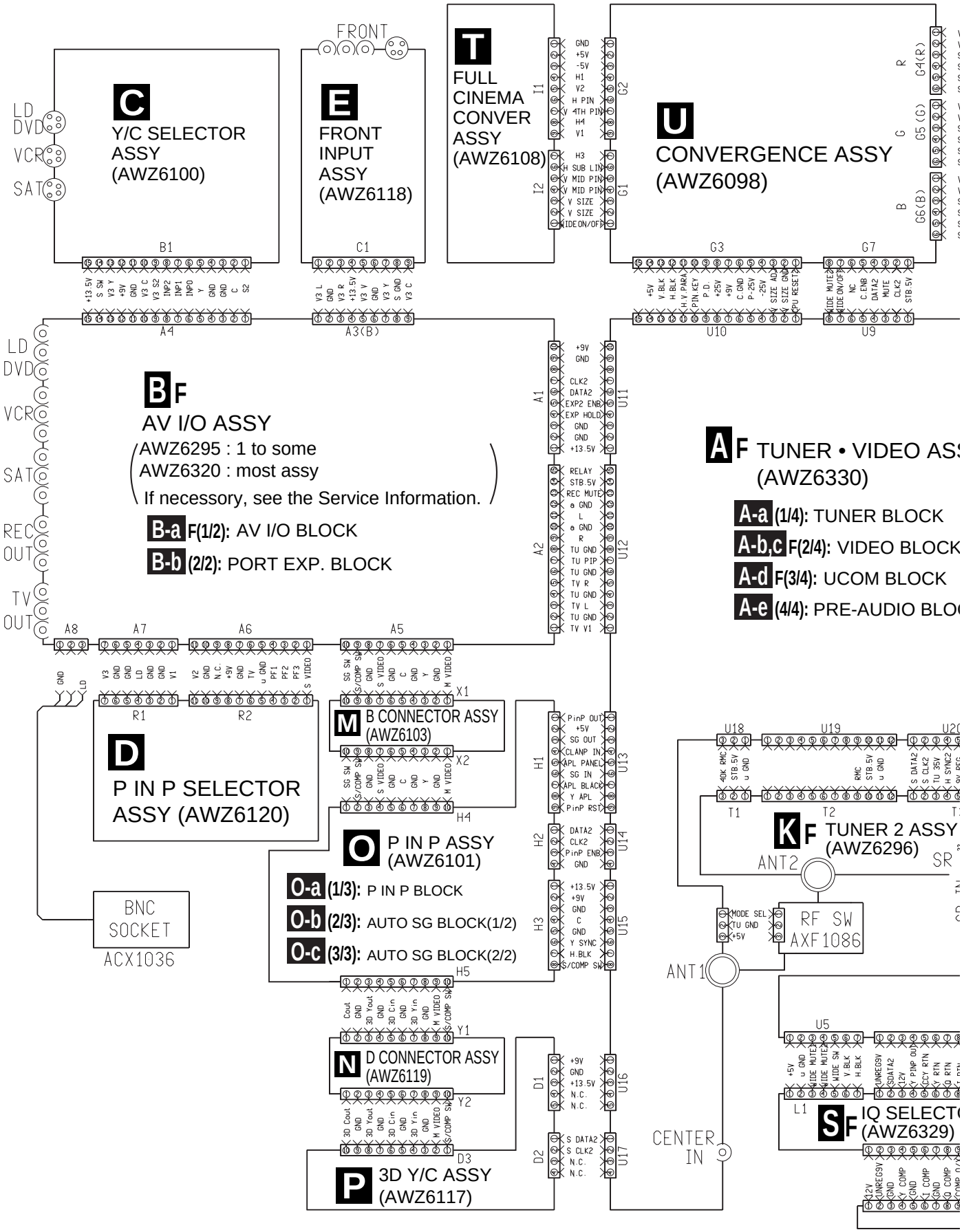
| Mark | No. | Description | Part No. |
|---|---|---|---|
| | R7123 | | RS1/16S103J |
| | R7047,R7071,R7101 | | RS1/16S104J |
| | R7007,R7031,R7045,R7060,R7061 | | RS1/16S152J |
| | R7067,R7068 | | RS1/16S152J |
| | R7075 | | RS1/16S183J |
| | R7098 | | RS1/16S203J |
| | R7070,R7081,R7087 | | RS1/16S222J |
| | R7005,R7006,R7018,R7019,R7029 | | RS1/16S223J |
| | R7043,R7066,R7118-R7120,R7125 | | RS1/16S223J |
| | R7128,R7131 | | RS1/16S242J |
| | R7097 | | RS1/16S243J |
| | R7010,R7020,R7022,R7074 | | RS1/16S272J |
| | R7130 | | RS1/16S331J |
| | R7012,R7024,R7058,R7059 | | RS1/16S332J |
| | R7062,R7063,R7088 | | RS1/16S332J |
| | R7028,R7065 | | RS1/16S333J |
| | R7082 | | RS1/16S471J |
| | R7049,R7078,R7084,R7121 | | RS1/16S472J |
| | R7048 | | RS1/16S562J |
| | R7064,R7073 | | RS1/16S681J |
| | R7054,R7055,R7086,R7126,R7134 | | RS1/16S682J |
| | R7100 | | RS1/16S683J |
| | R7001,R7014,R7027 | | RS1/16S750J |
| | R7122 | | RS1/2S221J |
| | R7108 | | RS1MMF8R2J |

### OTHERS

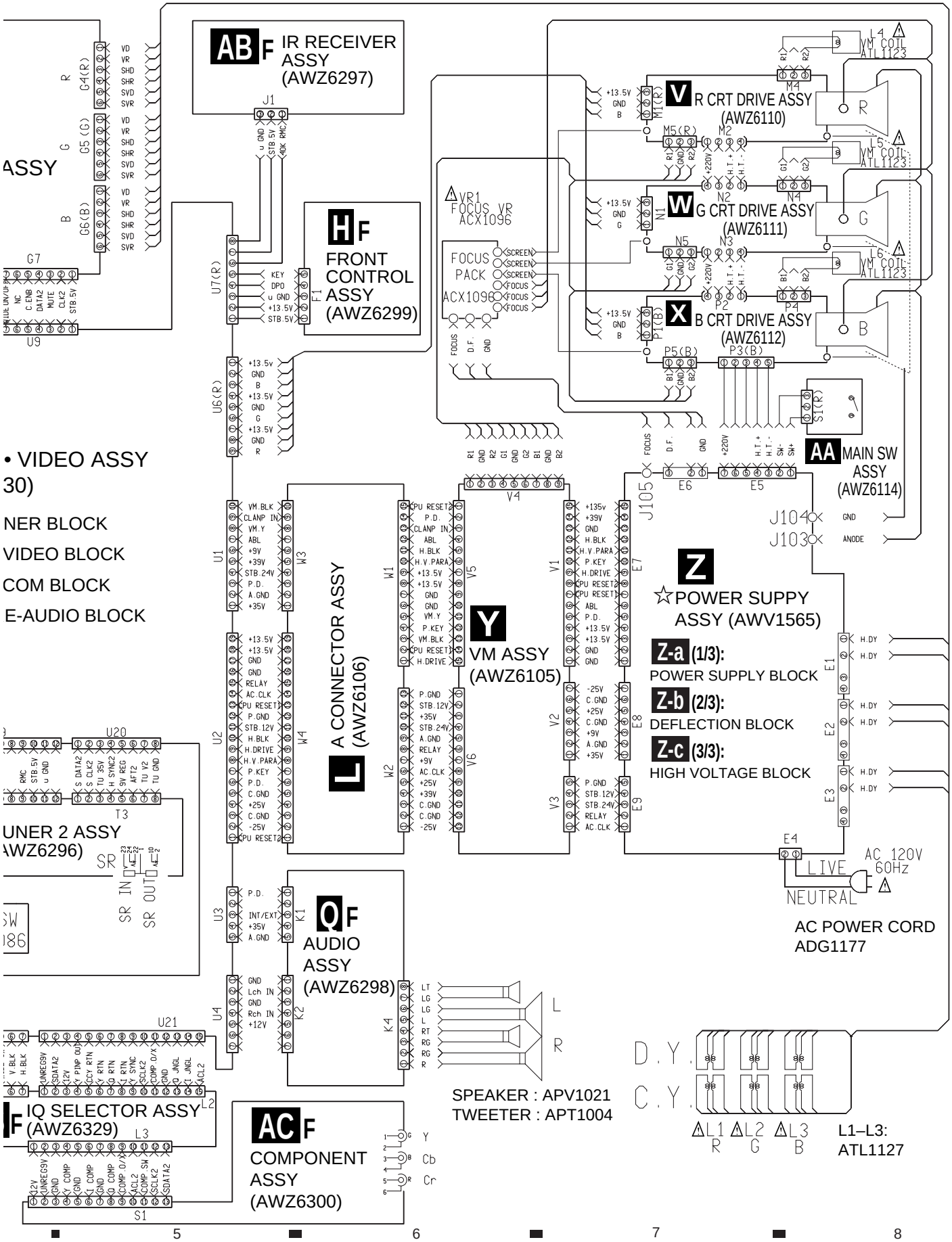
| | | | |
|---|---|---|---|
| | DL7001,DL7002 | DELAY LINE | ATN1039 |
| | CN7002 | 3P PIN JACK | AKB1268 |
| | 7001 | CABLE HOLDER | AKT1011 |

# 3. SCHEMATIC DIAGRAM

## 3.1 OVERALL WIRING DIAGRAM



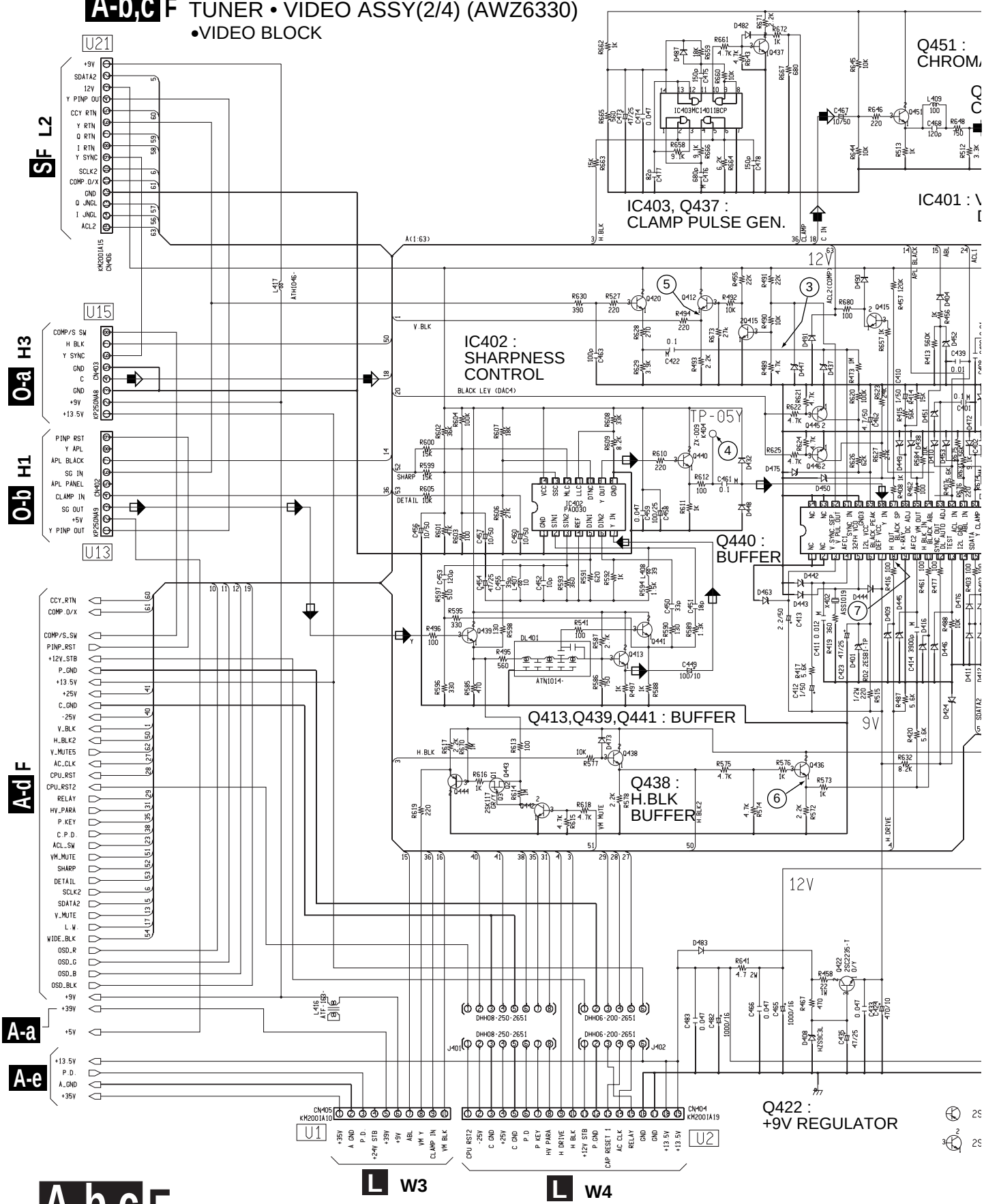
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".


AB F IR RECEIVER ASSY (AWZ6297)
H F FRONT CONTROL ASSY (AWZ6299)
V R CRT DRIVE ASSY (AWZ6110)
W G CRT DRIVE ASSY (AWZ6111)
X B CRT DRIVE ASSY (AWZ6112)
AA MAIN SW ASSY (AWZ6114)
Z ☆POWER SUPPY ASSY (AWV1565)
Z-a (1/3): POWER SUPPLY BLOCK
Z-b (2/3): DEFLECTION BLOCK
Z-c (3/3): HIGH VOLTAGE BLOCK
Y VM ASSY (AWZ6105)
L A CONNECTOR ASSY (AWZ6106)
QF AUDIO ASSY (AWZ6298)
AC F COMPONENT ASSY (AWZ6300)
F IQ SELECTOR ASSY (AWZ6329)
• VIDEO ASSY 30)
NER BLOCK
VIDEO BLOCK
COM BLOCK
E-AUDIO BLOCK
UNER 2 ASSY WZ6296)
FOCUS PACK ACX1096
VR1 FOCUS VR ACX1096
AC POWER CORD ADG1177
SPEAKER : APV1021
TWEETER : APT1004
L1–L3: ATL1127

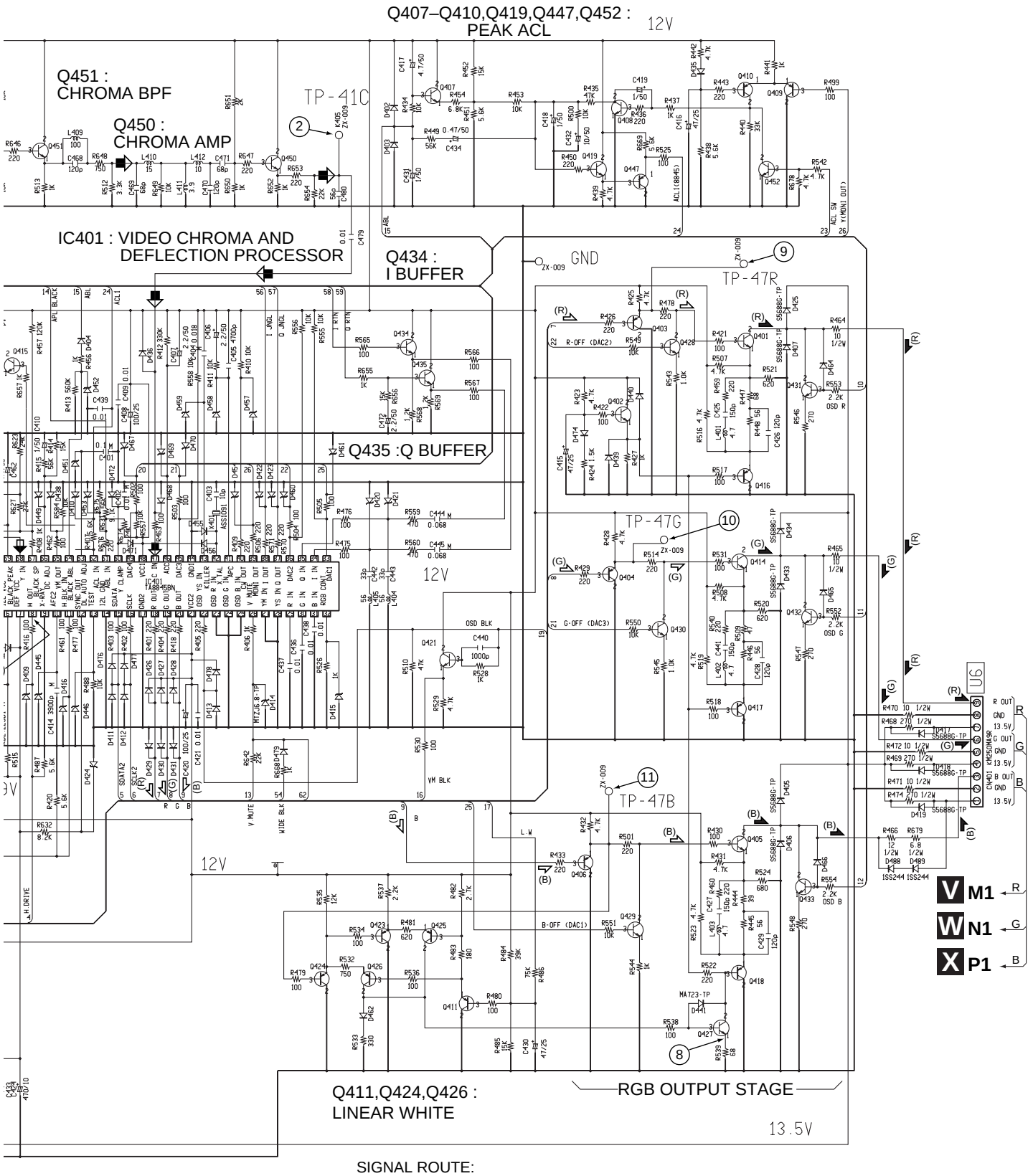
## 3.2 TUNER • VIDEO ASSY (2/4)

A-b,c F TUNER • VIDEO ASSY(2/4) (AWZ6330)

•VIDEO BLOCK



Note : The waveforms are same as PRO-119 and PRO-99.
Refer to the service manual (ARP2936).



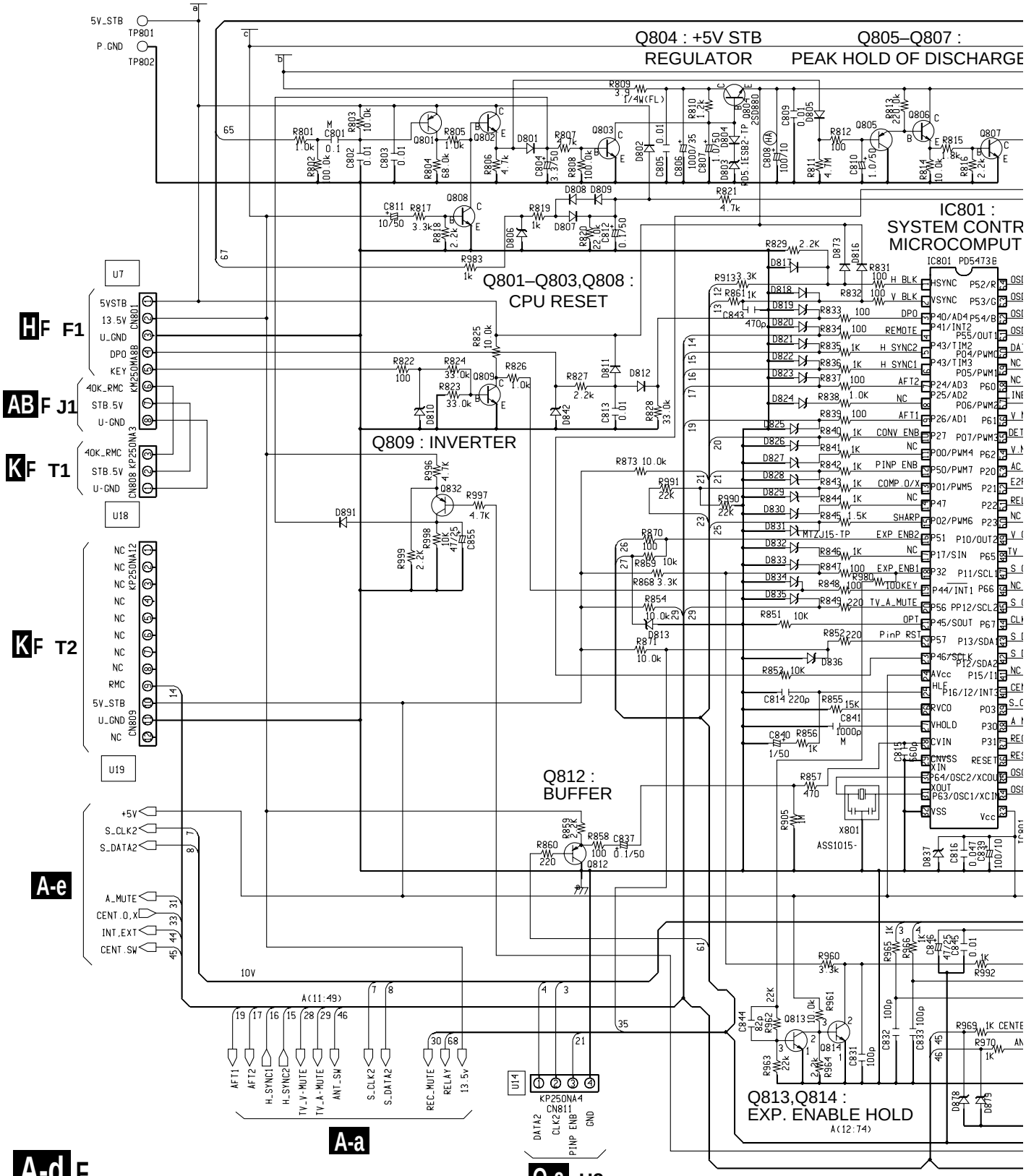

SIGNAL ROUTE:

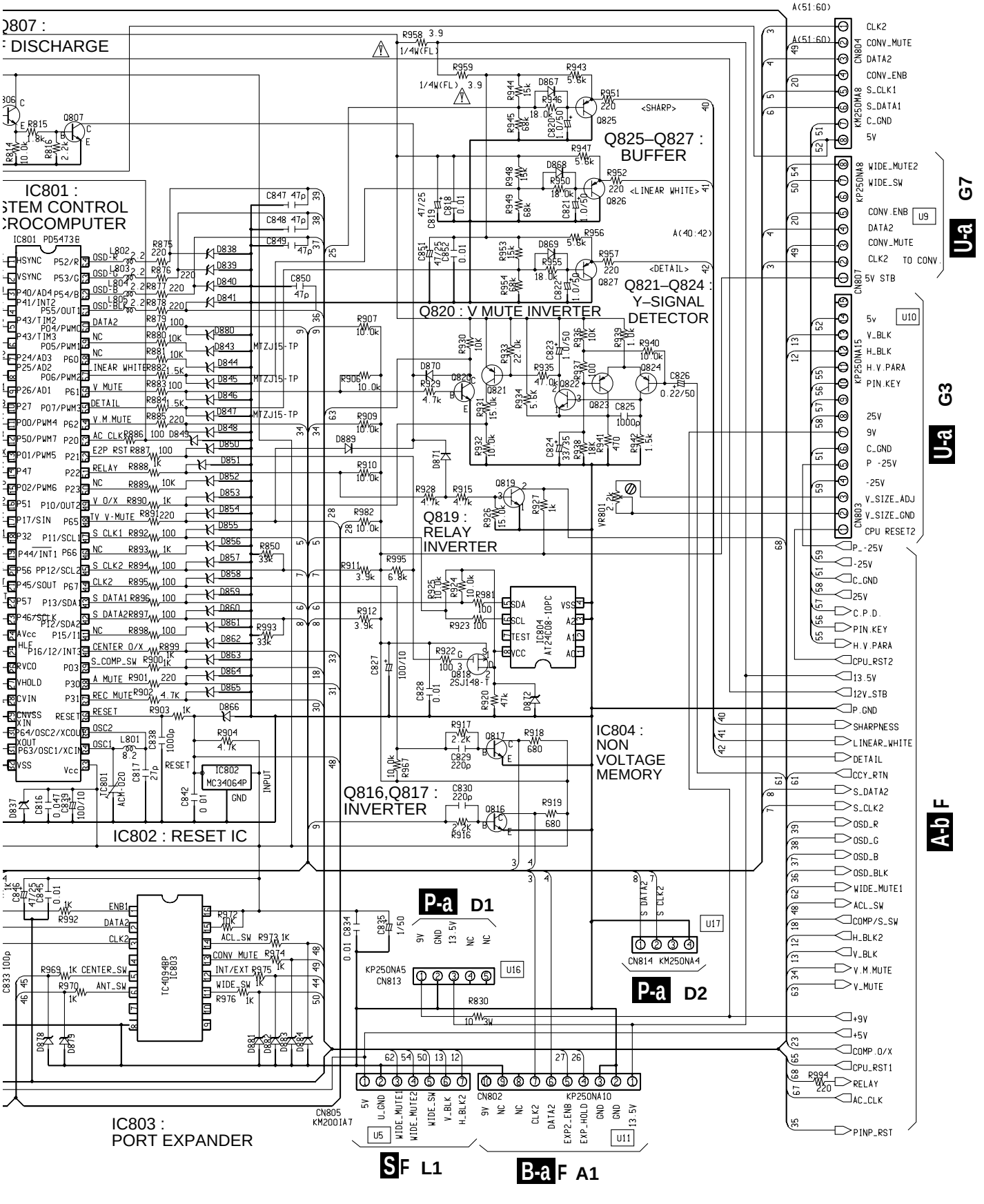
: Y SIGNAL ROUTE
: C SIGNAL ROUTE
(R) : R-Y SIGNAL ROUTE
(G) : G-Y SIGNAL ROUTE
(B) : B-Y SIGNAL ROUTE
(R) : R SIGNAL ROUTE
(G) : G SIGNAL ROUTE
(B) : B SIGNAL ROUTE

TOR

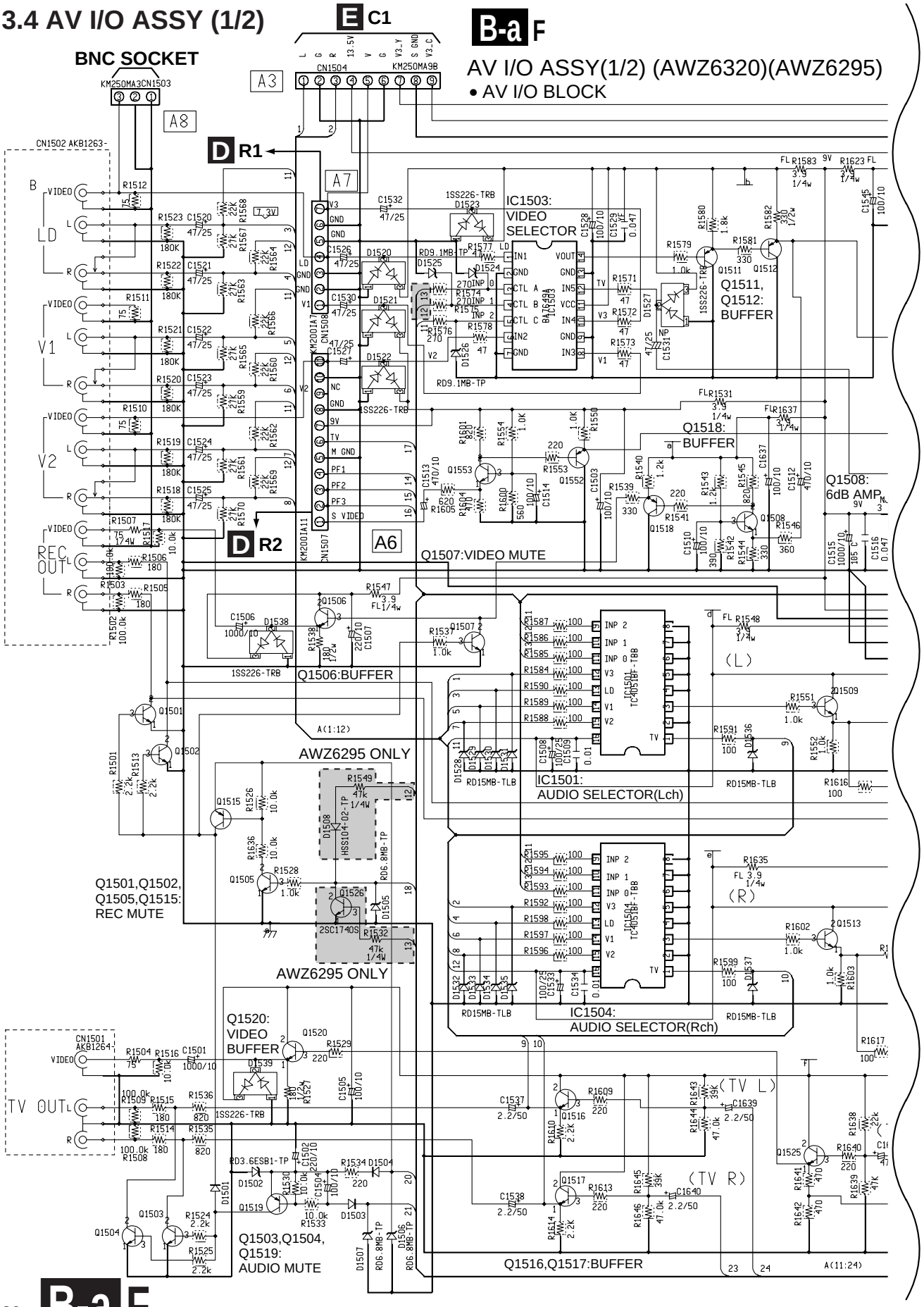
2SA933S
2SC1740S
HSS104-02
MTZJ15

## 3.3 TUNER • VIDEO ASSY (3/4)

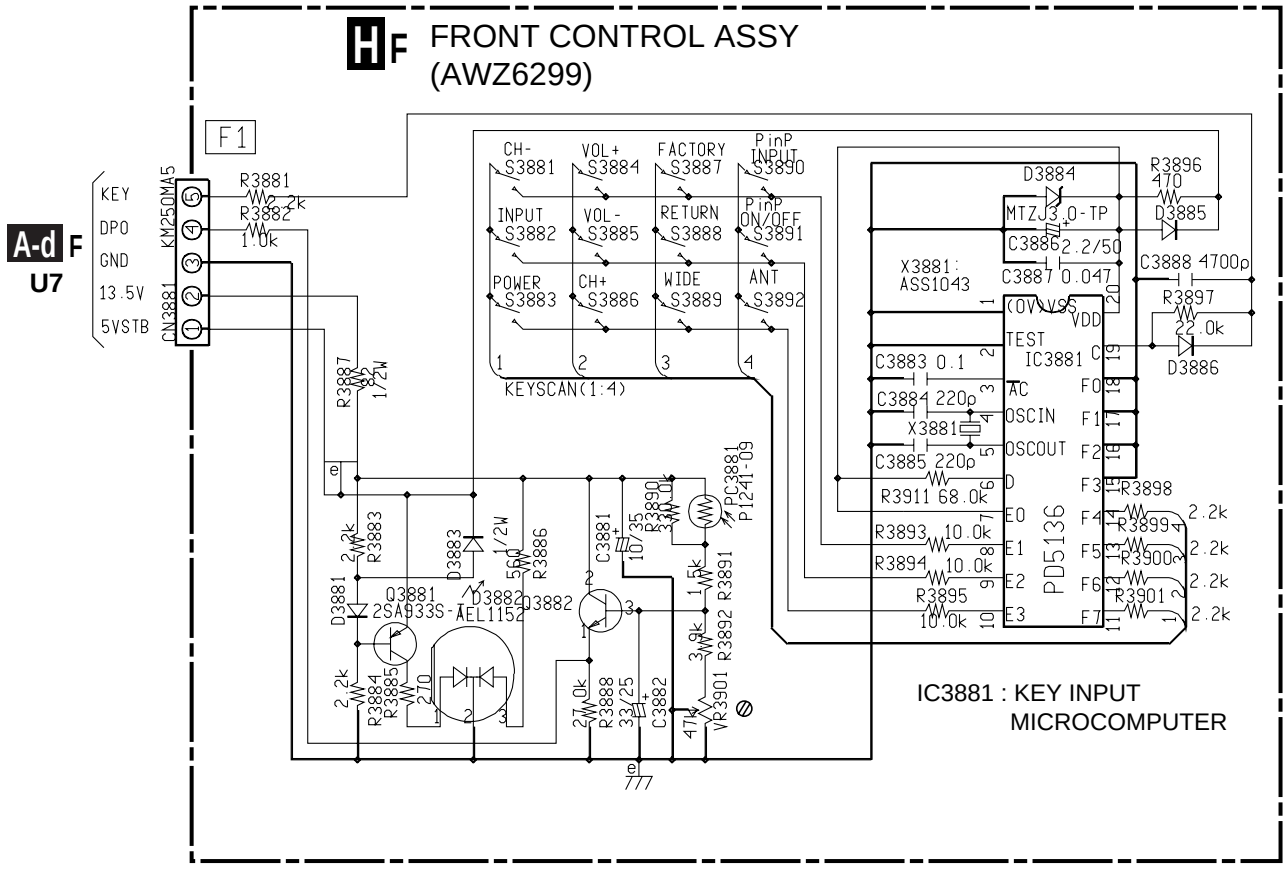


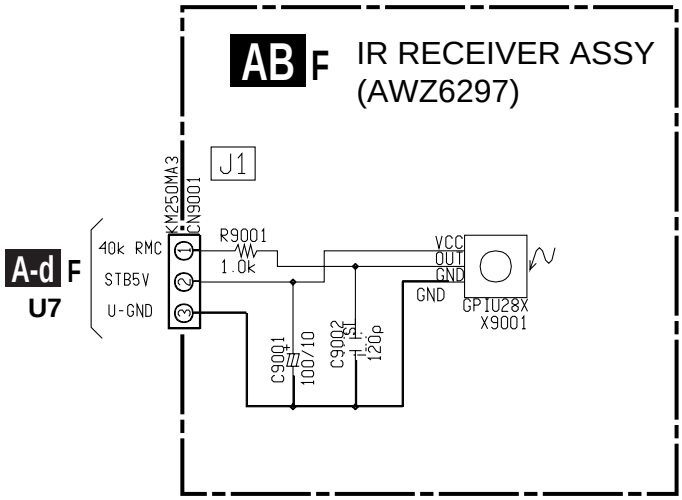

IC801 :
SYSTEM CONTROL
MICROCOMPUTER
IC801 PD5473B
Q807 :
DISCHARGE
Q825–Q827 :
BUFFER
Q821–Q824 :
Y–SIGNAL
DETECTION
Q820 : V MUTE INVERTER
Q819 :
RELAY
INVERTER
Q816,Q817 :
INVERTER
IC804 :
NON
VOLATILE
MEMORY
IC802 : RESET IC
IC803 :
PORT EXPANDER
IC802
MC34064P
IC804
AT24C08-10PC
IC4094BP
IC803
CN804
KM250MA8
CN807
KP250NA15
CN803
KP250NA15
CN813
KP250NA5
CN814
KM250NA4
CN805
KM2001A7
CN802
KP250NA10
U9
U10
U16
U17
U5
U11
CLK2
CONV_MUTE
DATA2
CONV_ENB
S_CLK1
S_DATA1
C_GND
5V
WIDE_MUTE2
WIDE_SW
CONV.ENB
DATA2
CONV_MUTE
CLK2
TO CONV.
5V STB
5v
V_BLK
H_BLK
H.V.PARA
PIN.KEY
25V
9V
C_GND
P -25V
-25V
V_SIZE_ADJ
V_SIZE_GND
CPU RESET2
P_-25V
-25V
C_GND
25V
C.P.D.
PIN.KEY
H.V.PARA
CPU_RST2
13.5V
12V_STB
P.GND
SHARPNESS
LINEAR_WHITE
DETAIL
CCY_RTN
S_DATA2
S_CLK2
OSD_R
OSD_G
OSD_B
OSD_BLK
WIDE_MUTE1
ACL_SW
COMP/S_SW
H_BLK2
V_BLK
V.M.MUTE
V_MUTE
+9V
+5V
COMP.O/X
CPU_RST1
RELAY
AC_CLK
PINP_RST
INPUT
RESET
ENB1
DATA2
CLK2
ACL_SW
CONV MUTE
INT/EXT
WIDE_SW
CENTER_SW
ANT_SW
5V
U.GND
WIDE_MUTE1
WIDE_MUTE2
WIDE_SW
V_BLK
H_BLK2
9V
NC
NC
CLK2
DATA2
EXP2_ENB
EXP_HOLD
GND
GND
13.5V
A(51:60)
A(40:42)
<SHARP>
<LINEAR WHITE>
<DETAIL>
INVERT WHITE
V MUTE
DETAIL
V.M.MUTE
AC CLK
E2P RST
RELAY
V O/X
TV V-MUTE
S CLK1
S CLK2
CLK2
S DATA1
S DATA2
CENTER O/X
S_COMP_SW
A MUTE
REC MUTE
RESET
OSD-R
OSD-G
OSD-B
OSD-BLK
DATA2
NC
NC
NC

## 3.4 AV I/O ASSY (1/2)



## 3.5 FRONT CONTROL and IR RECEIVER ASSEMBLIES



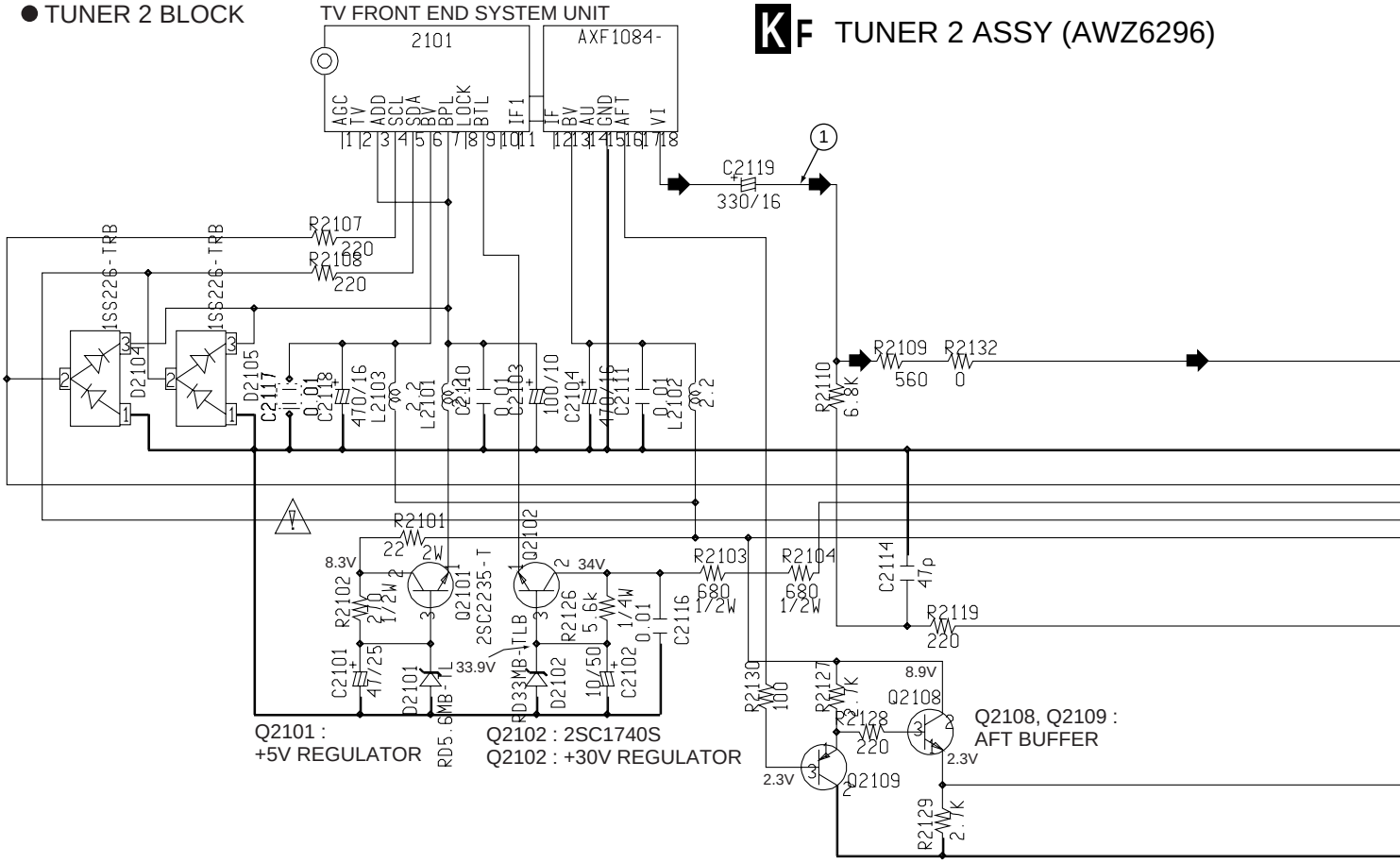



## 3.6 TUNER 2 ASSY

● TUNER 2 BLOCK

TV FRONT END SYSTEM UNIT

KF TUNER 2 ASSY (AWZ6296)




Note: Resister indicated in Ω ,1/4W +5%tolerance
unless otherwise noted. k:kΩ . M:MΩ .
Capacitor indicated in Capacity(μF)/Voltage(V)
unless otherwise noted. p:pF.
Indication without voltage is 50V except Electrolytic capacitor.

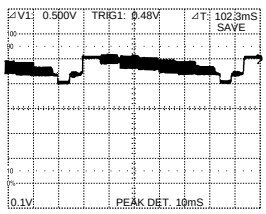
2SA1162 2SC2712 HSS104-02

- ANTENNA SELECT : ANT A
- Video signal : NTSC color bar, 87.5% modulation
- Audio signal : 1kHz sinewave, ±25kHz deviation
- DC range (unless otherwise noted)

Voltage of TV FRONT END

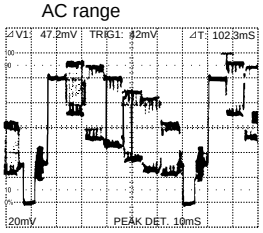
| Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Voltage (V) | 6.9 | 5.5 | 5 | – | – | 8.9 | 5 | – | 33.2 |
| Pin | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Voltage (V) | – | – | – | 8.9 | 4.6 | 0 | 2.3 | 1.1 | 4.6 |

① **TV Front End pin 18**
V : 1V/div. H : 10μsec/div.



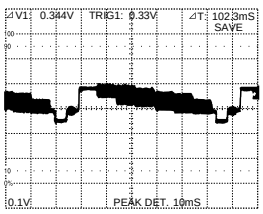

-GND

① **TV Front End pin 18**
V : 0.2V/div. H : 10μsec/div.
AC range



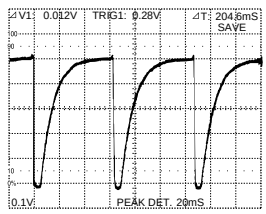

-GND

② **T3-pin 7**
V : 1V/div. H : 10μsec/div.

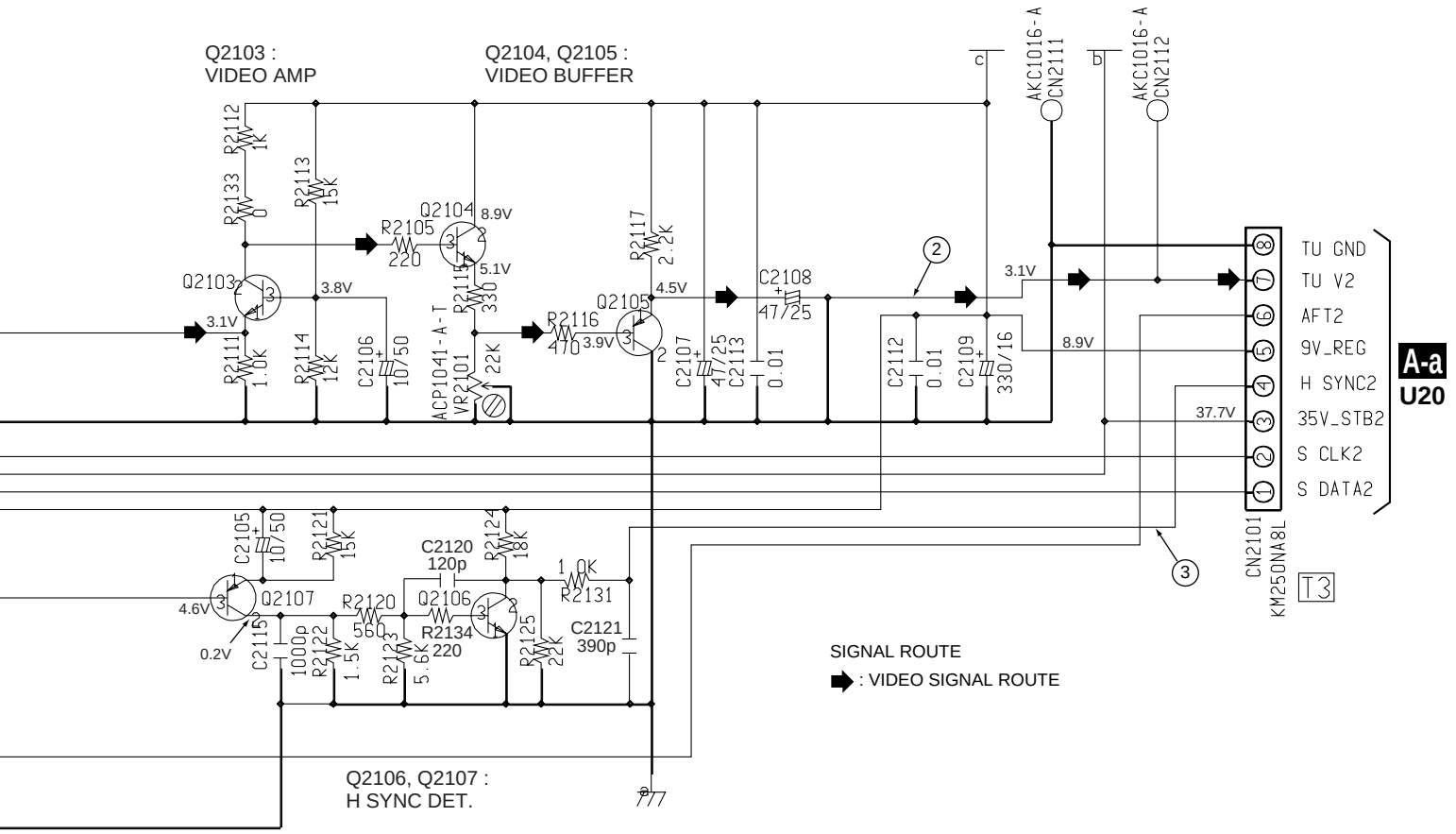


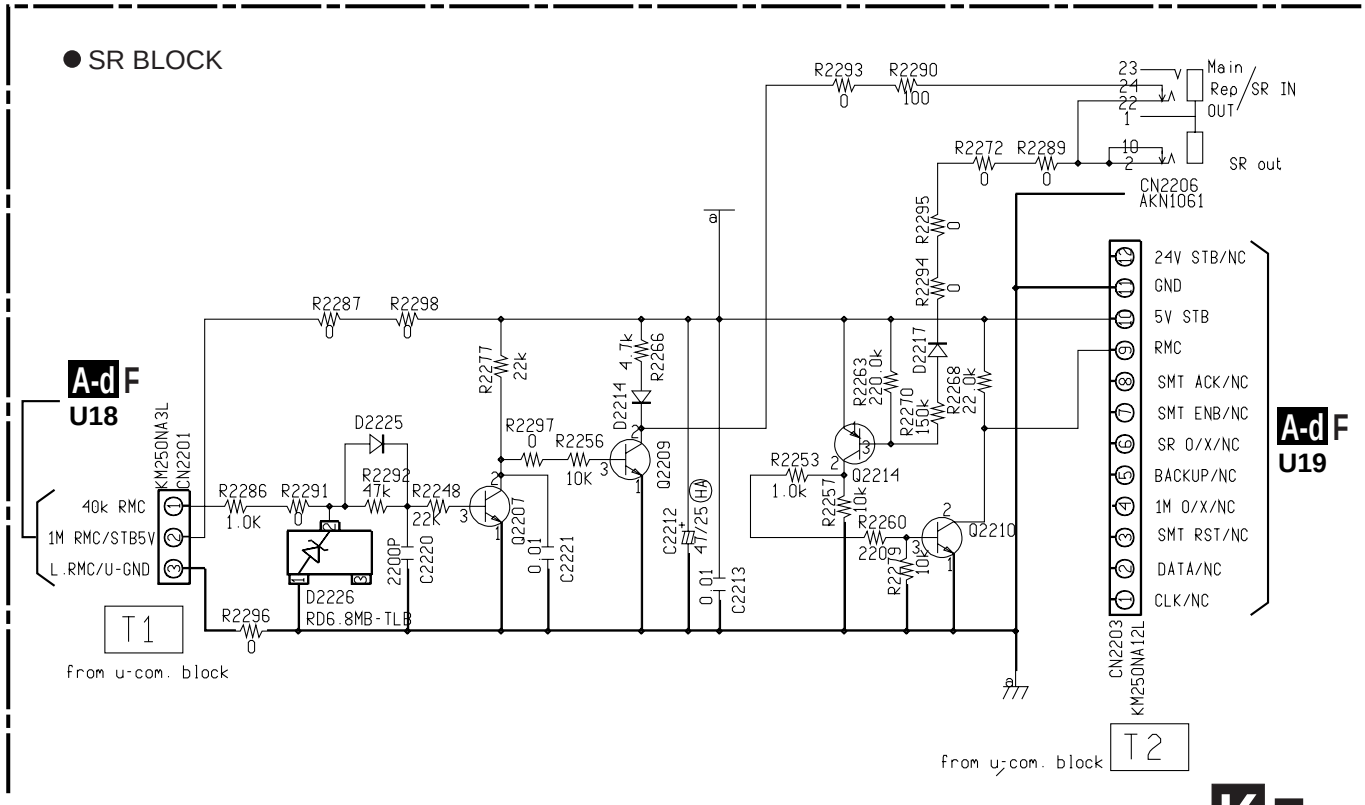

-GND

③ **T3-pin 4**
V : 1V/div. H : 20μsec/div.

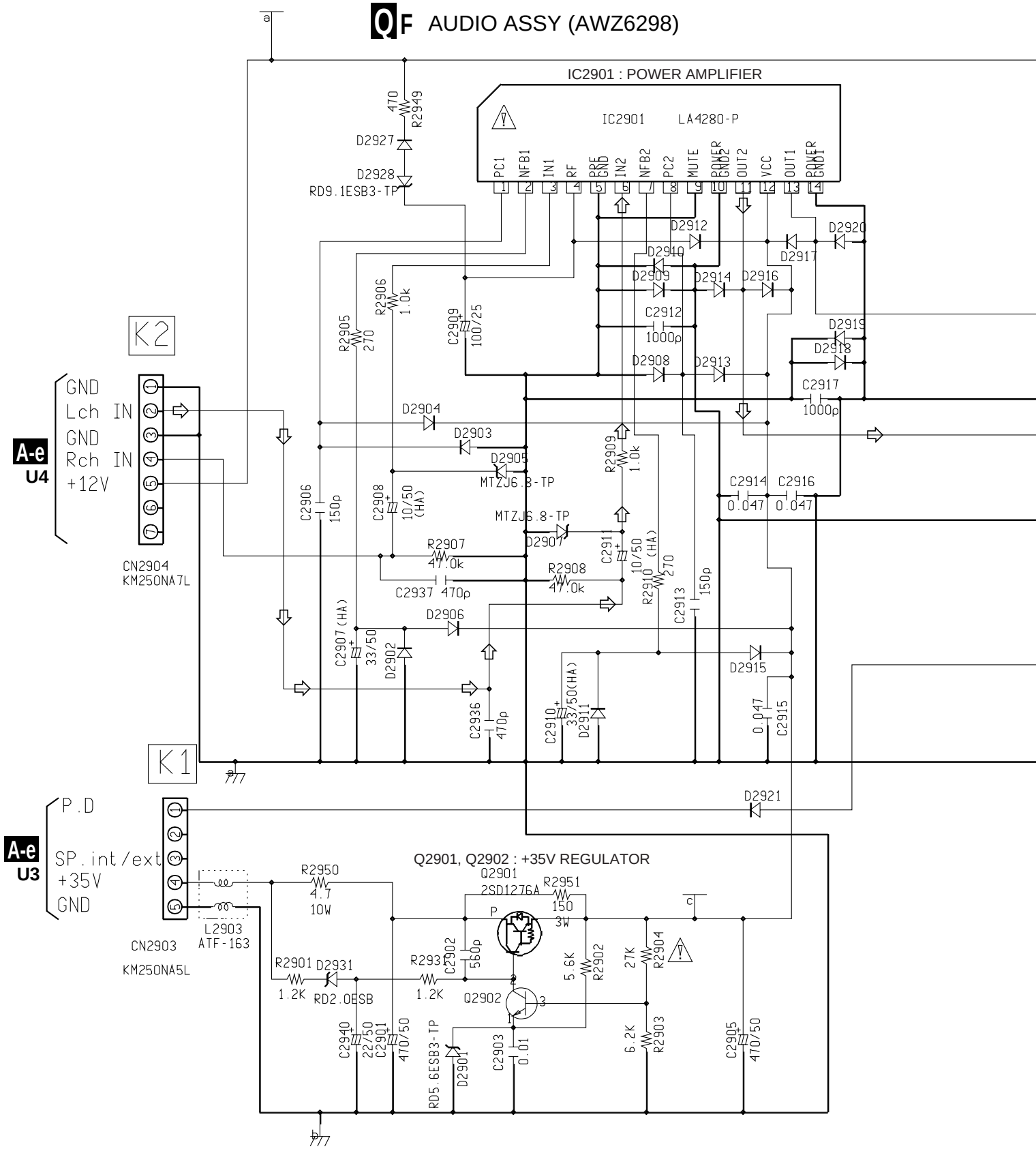


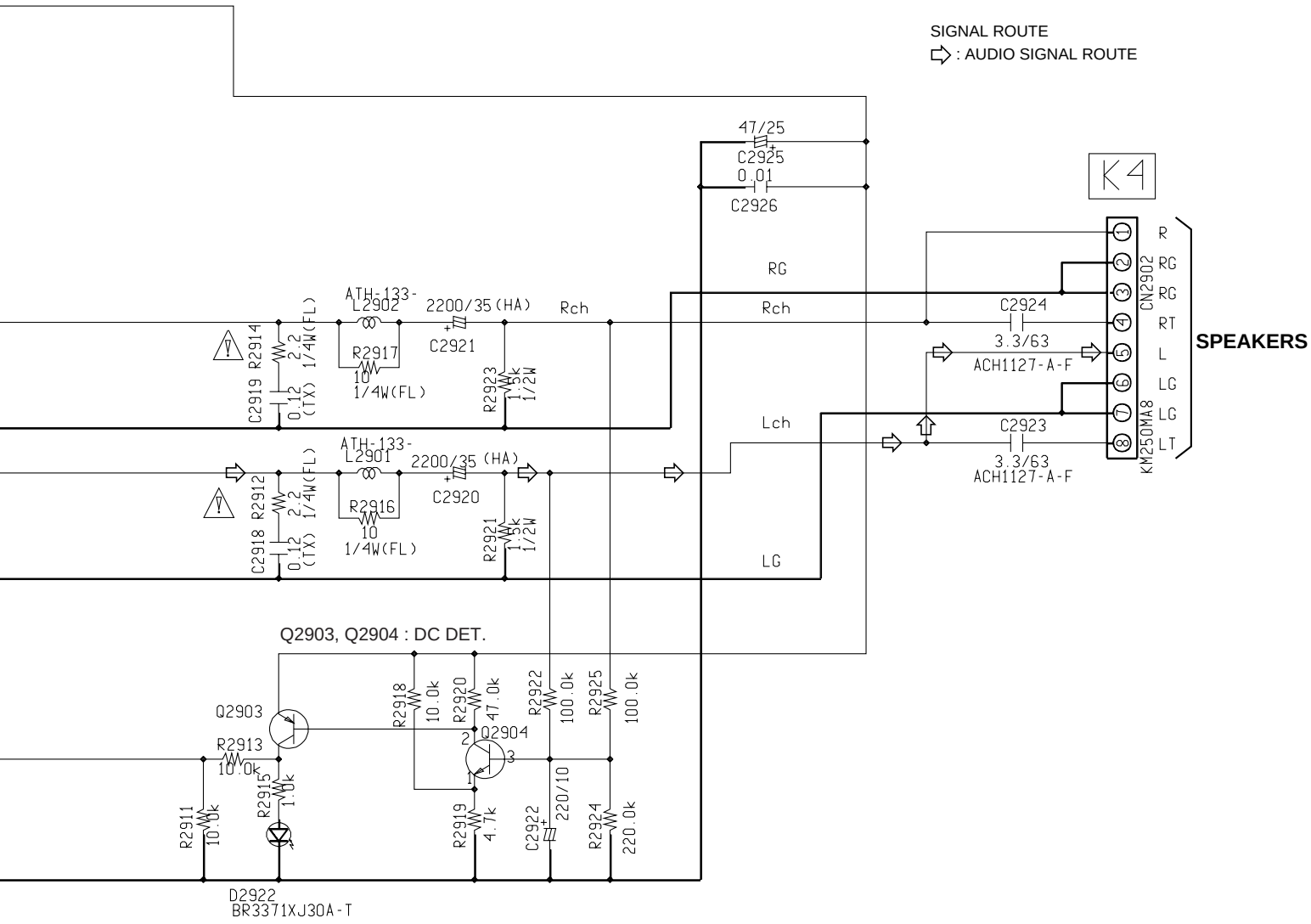

-GND


Q2103 :
VIDEO AMP
Q2104, Q2105 :
VIDEO BUFFER
AKC1016-A
CN2111
AKC1016-A
CN2112
TU GND
TU V2
AFT2
9V_REG
H SYNC2
35V_STB2
S CLK2
S DATA2
A-a
U20
CN2101
KM250NA8L
T3
3.1V
3.8V
4.5V
8.9V
37.7V
SIGNAL ROUTE
: VIDEO SIGNAL ROUTE
Q2106, Q2107 :
H SYNC DET.


● SR BLOCK
A-d F
U18
A-d F
U19
Main Rep/SR IN
SR out
CN2206
AKN1061
24V STB/NC
GND
5V STB
RMC
SMT ACK/NC
SMT ENB/NC
SR O/X/NC
BACKUP/NC
1M O/X/NC
SMT RST/NC
DATA/NC
CLK/NC
CN2203
KM250NA12L
40k RMC
1M RMC/STB5V
L.RMC/U-GND
KM250NA3L
CN2201
T1
from u-com. block
T2
from u-com. block

## 3.7 AUDIO ASSY






2SC1740S

2SA933S

HSS104-02

Notes

1.RESISTORS

Indicated in 1/2(W),1/4(W), 5%

tolerance unless otherwise noted k k

2.CAPASITORS

Indicated in capacity( F)/Voltage unless

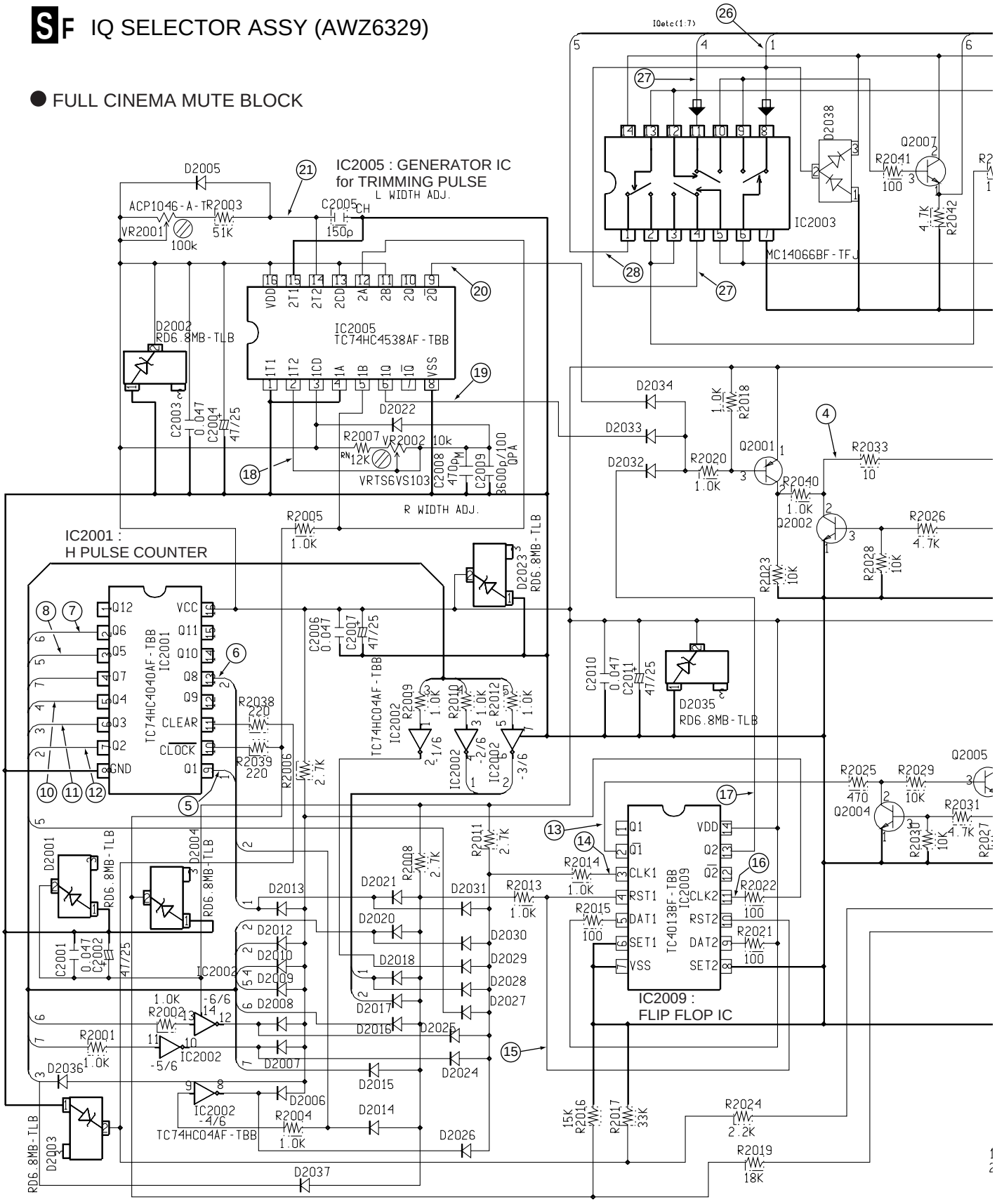
otherwise noted p pF

Indication without voltage is 50V

## 3.8 IQ SELECTOR ASSY

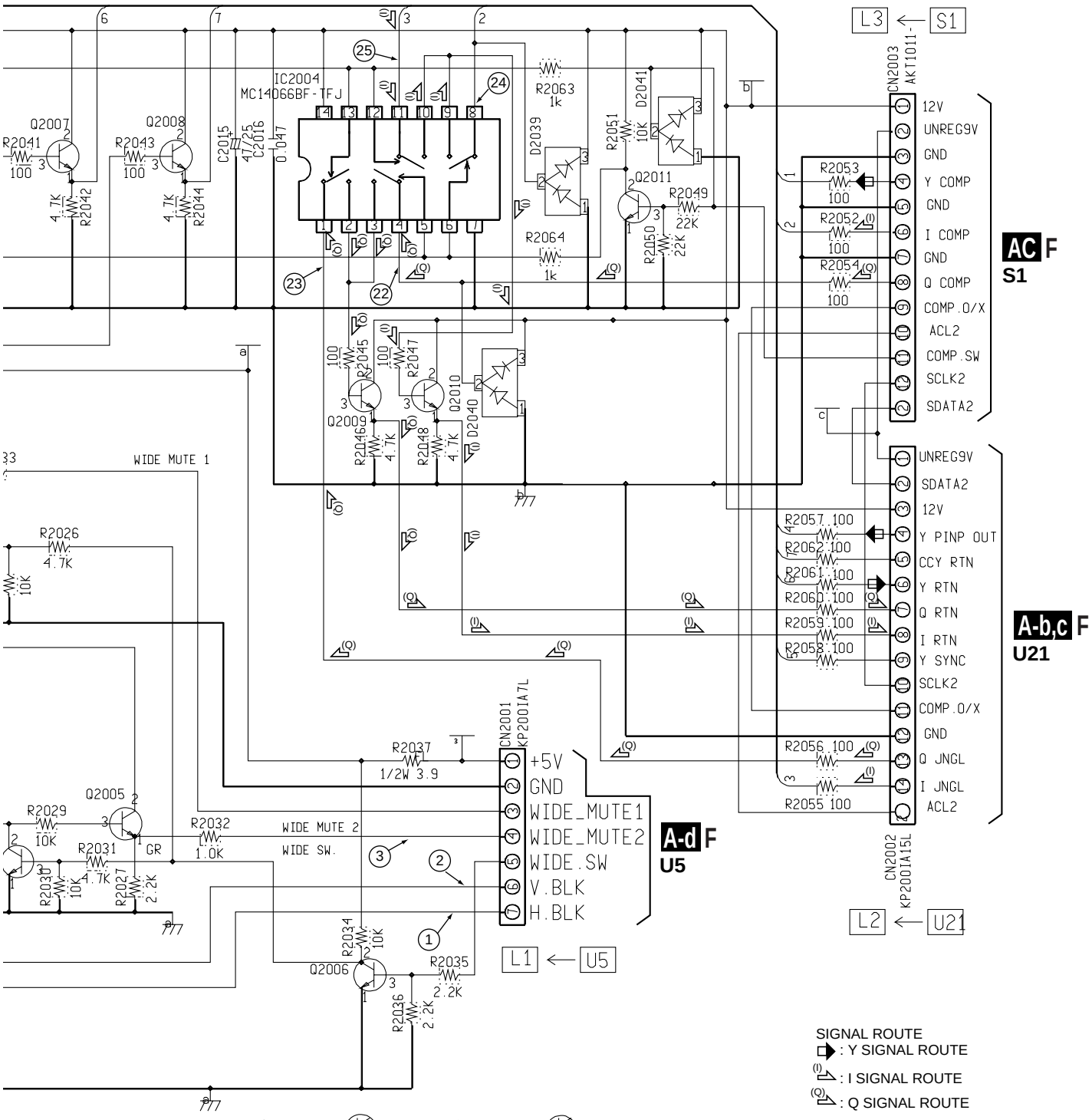
SF IQ SELECTOR ASSY (AWZ6329)

● FULL CINEMA MUTE BLOCK



## ● IQ SELECTOR BLOCK

Note :
The waveforms of (1) to (21) is the same as the thing of FULL CINEMA assy of PRO-119 and PRO-99.
Refer to page 36 for waveforms of (22) to (28) .




SIGNAL ROUTE
: Y SIGNAL ROUTE
: I SIGNAL ROUTE
: Q SIGNAL ROUTE

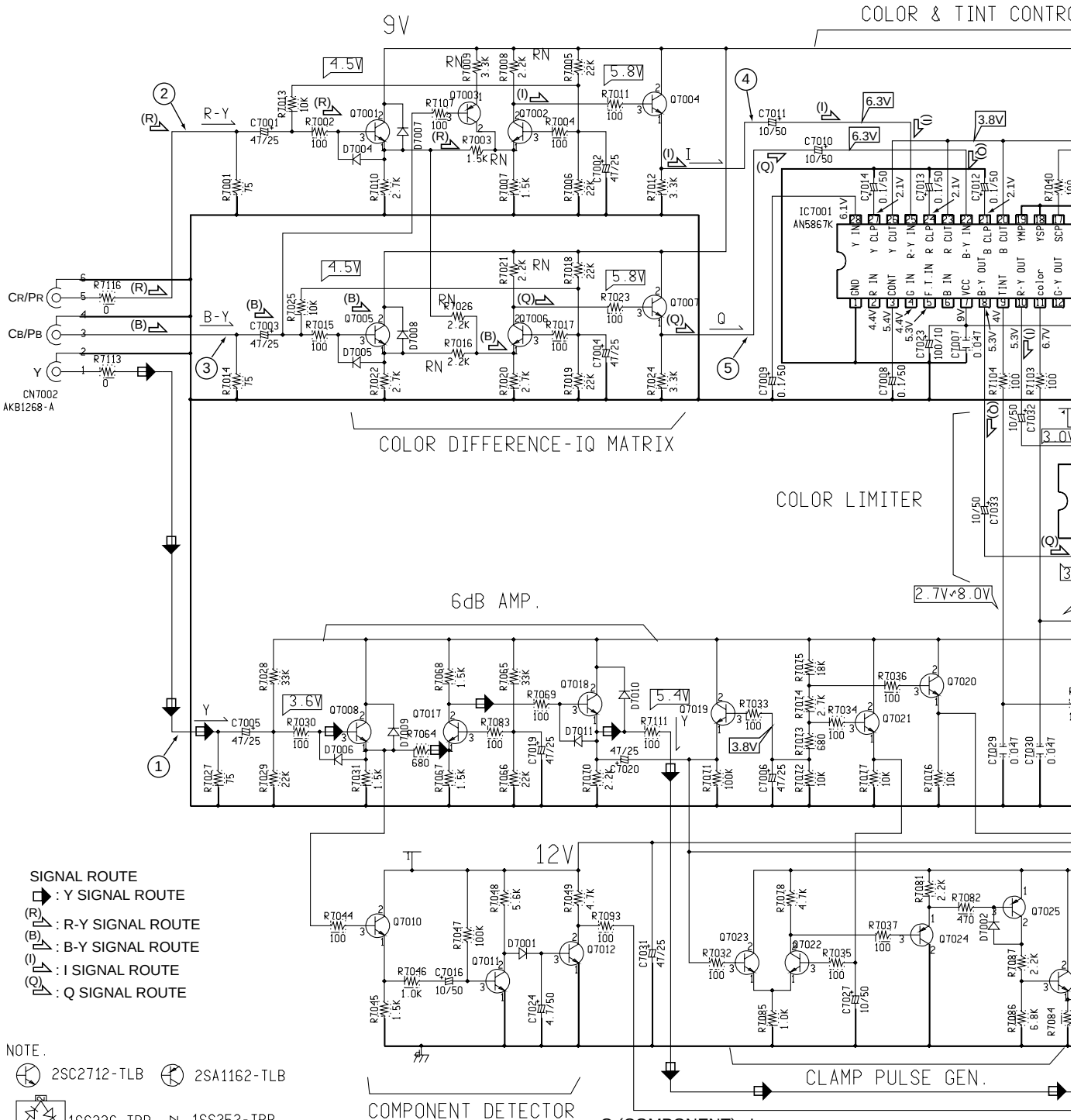
NOTE. 2SC2712-TLB 2SA1162-TLB

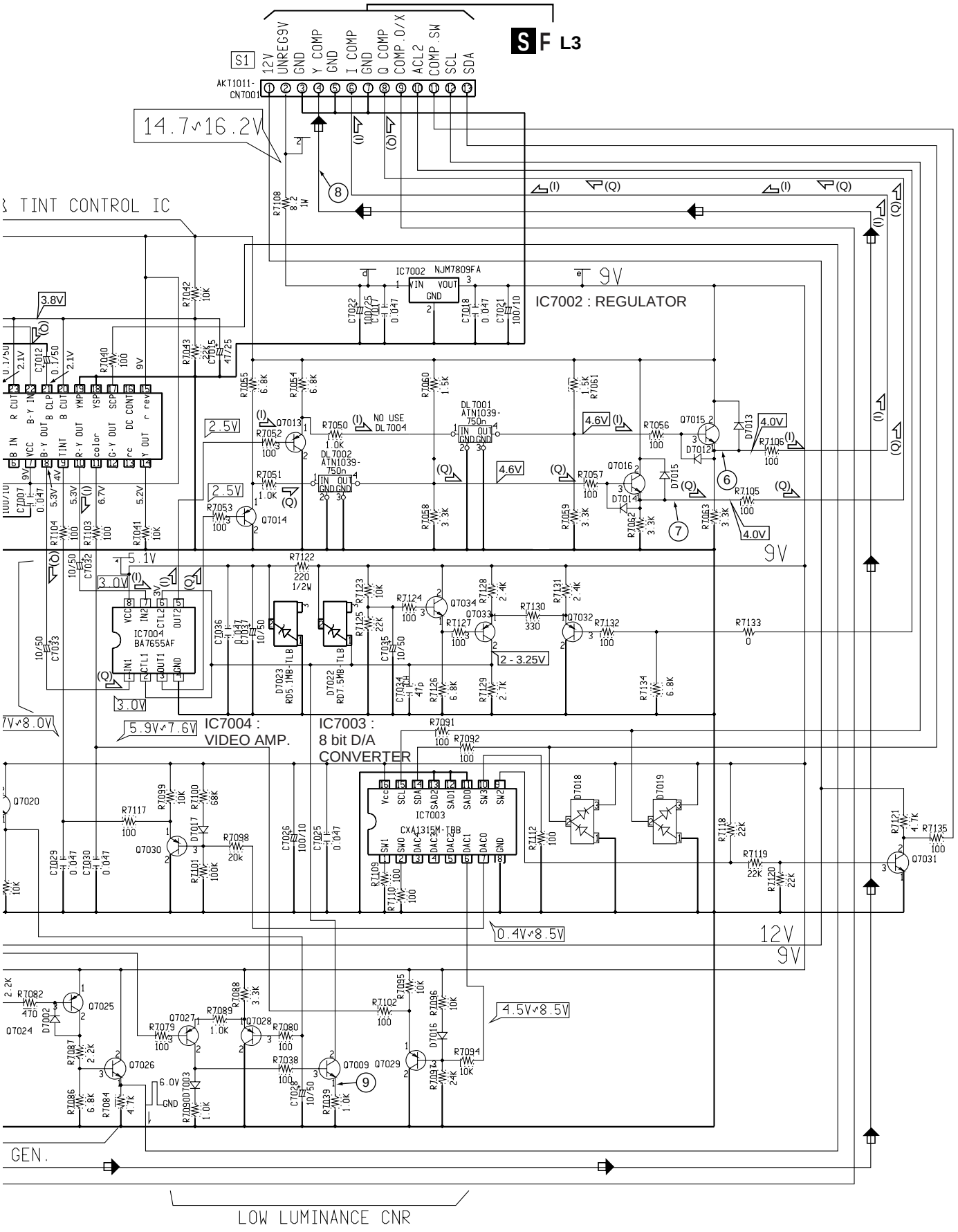
1SS226-TRB 1SS352-TRB

1.RESISTORS Indicated in 1/16W, +5% tolerance unless otherwise noted k:k
2.CAPACITORS Indicated in capacity (uF)/(V) unless otherwise noted pF.
Indicated without voltage is 50V except electrolytic capacitor.

## 3.9 COMPONENT ASSY

### ACF COMPONENT ASSY (AWZ6300)



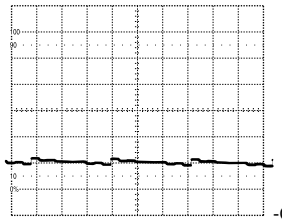

SF L3
S1
12V
UNREG9V
GND
Y COMP
GND
I COMP
GND
Q COMP
COMP.O/X
ACL2
COMP.SW
SCL
SDA
AKT1011-CN7001
14.7~16.2V
TINT CONTROL IC
IC7002 NJM7809FA
VIN VOUT GND
9V
IC7002 : REGULATOR
3.8V
2.5V
NO USE DL7004
DL7001 ATN1039-750n
DL7002 ATN1039-750n
4.6V
4.0V
5.1V
3.0V
IC7004 BA7655AF
IC7004 : VIDEO AMP.
IC7003 : 8 bit D/A CONVERTER
IC7003 CXA1315M-TBB
5.9V~7.6V
12 - 3.25V
0.4V~8.5V
4.5V~8.5V
6.0V
GEN.
LOW LUMINANCE CNR

## ● WAVEFORMS of IQ SELECTOR and COMPONENT ASSEMBLIES

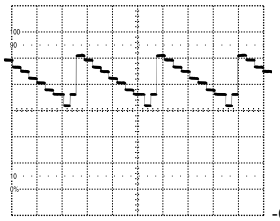
### S F IQ SELECTOR ASSY

• Input signal : 100/0 100/0 color bar

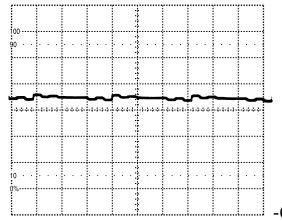
**㉒ IC2004-pin 4**
V : 2V/div. H : 20µsec/div.



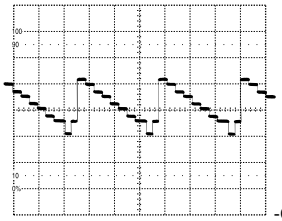

**㉗ IC2003-pins 4 and 11**
V : 1V/div. H : 20µsec/div.



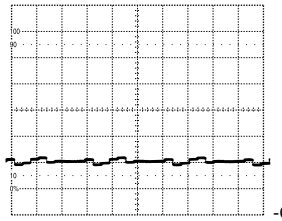

**㉓ IC2004-pin 1**
V : 2V/div. H : 20µsec/div.



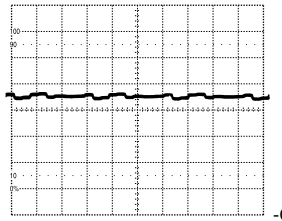

**㉘ IC2003-pin 1**
V : 1V/div. H : 20µsec/div.



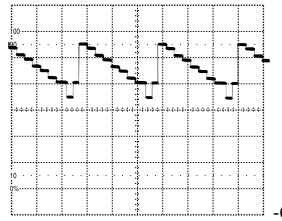

**㉔ IC2004-pin 8**
V : 2V/div. H : 20µsec/div.




**㉕ IC2004-pin 11**
V : 2V/div. H : 20µsec/div.



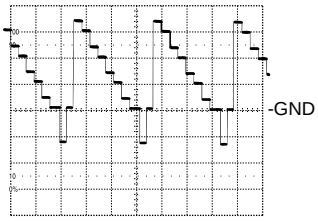

**㉖ IC2003-pin 8**
V : 1V/div. H : 20µsec/div.



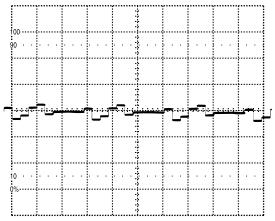

### AC F COMPONENT ASSY

• Input signal : 100/0 100/0 color bar

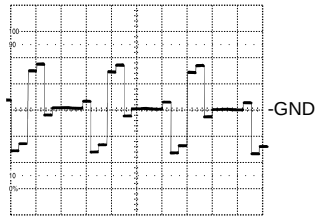
**① C7005 – side**
V : 200mV/div. H : 20µsec/div.



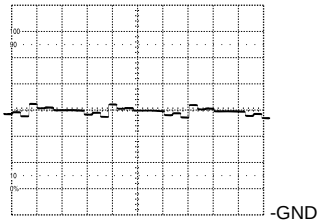

**⑥ Q7015 Emitter**
V : 1V/div. H : 20µsec/div.



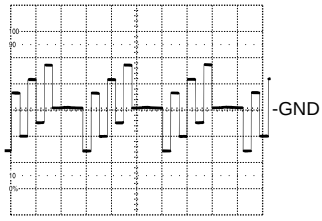
**② C7001 – side**
V : 200mV/div. H : 20µsec/div.



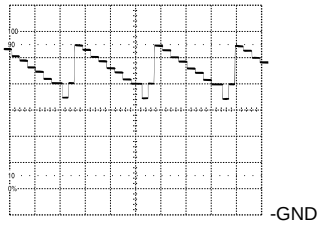

**⑦ Q7016 Emitter**
V : 1V/div. H : 20µsec/div.



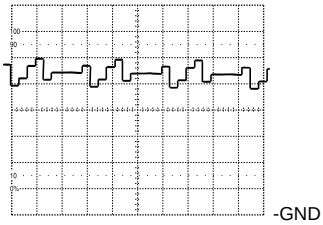

**③ C7003 – side**
V : 200mV/div. H : 20µsec/div.



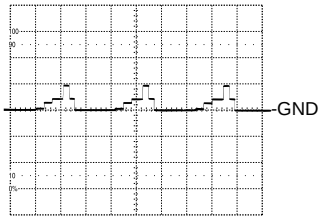

**⑧ CN7001-pin 4**
V : 1V/div. H : 20µsec/div.



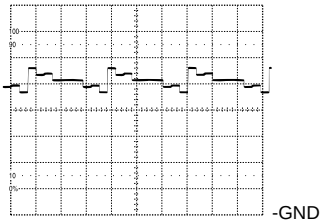

**④ C7011 – side**
V : 1V/div. H : 20µsec/div.




**⑨ Q7009 Emitter**
V : 1V/div. H : 20µsec/div.



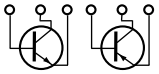
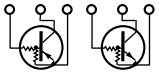
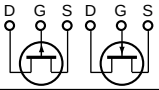
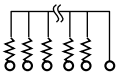

**⑤ C7010 – side**
V : 1V/div. H : 20µsec/div.



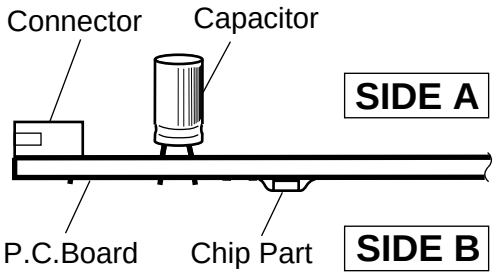
# 4. PCB CONNECTION DIAGRAM

## NOTE FOR PCB DIAGRAMS :

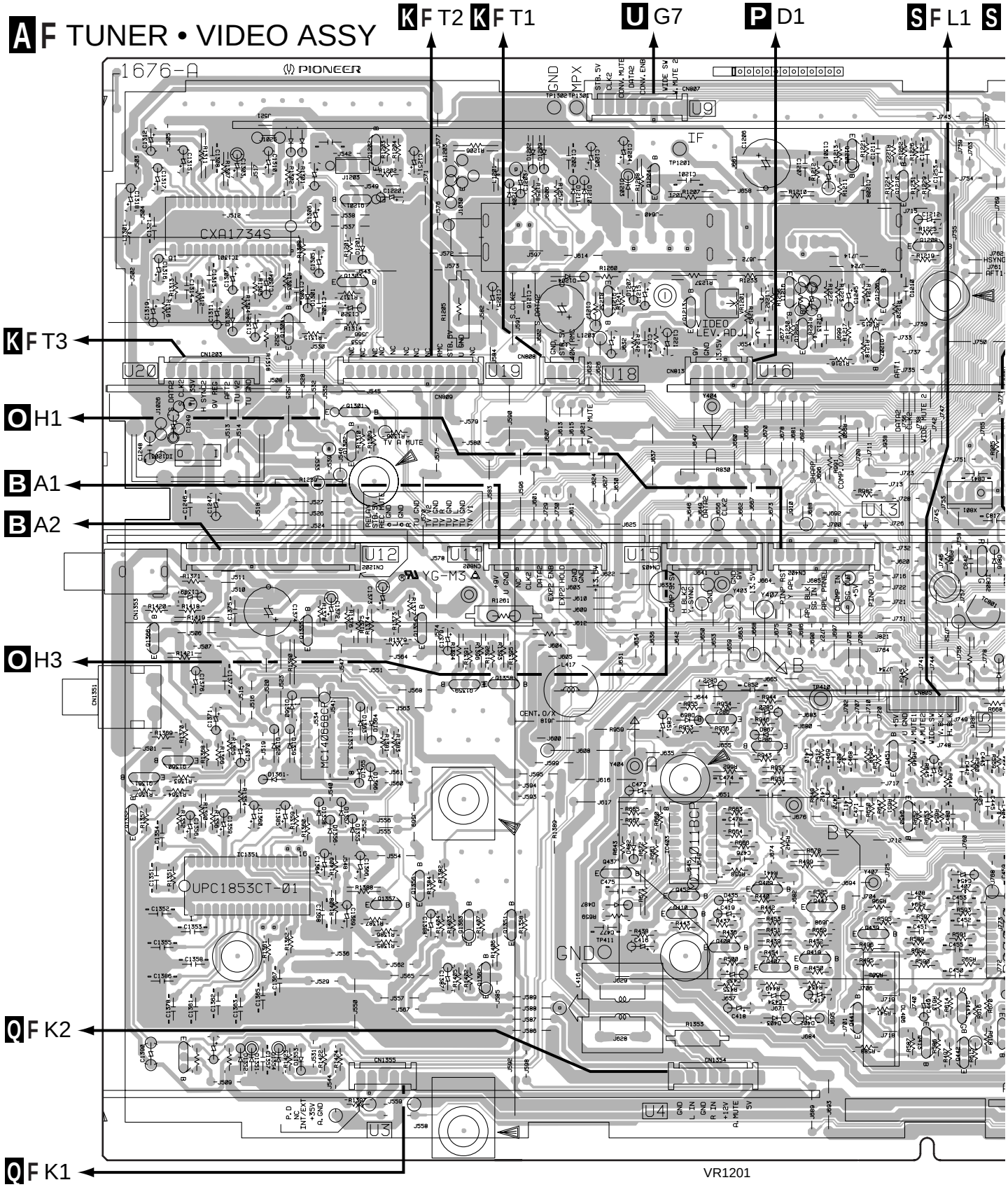
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

| Symbol In PCB Diagrams | Symbol In Schematic Diagrams | Part Name |
|---|---|---|
| |  | Transistor |
| |  | Transistor with resistor |
| |  | Field effect transistor |
| |  | Resistor array |
| | | 3-terminal regulator |

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

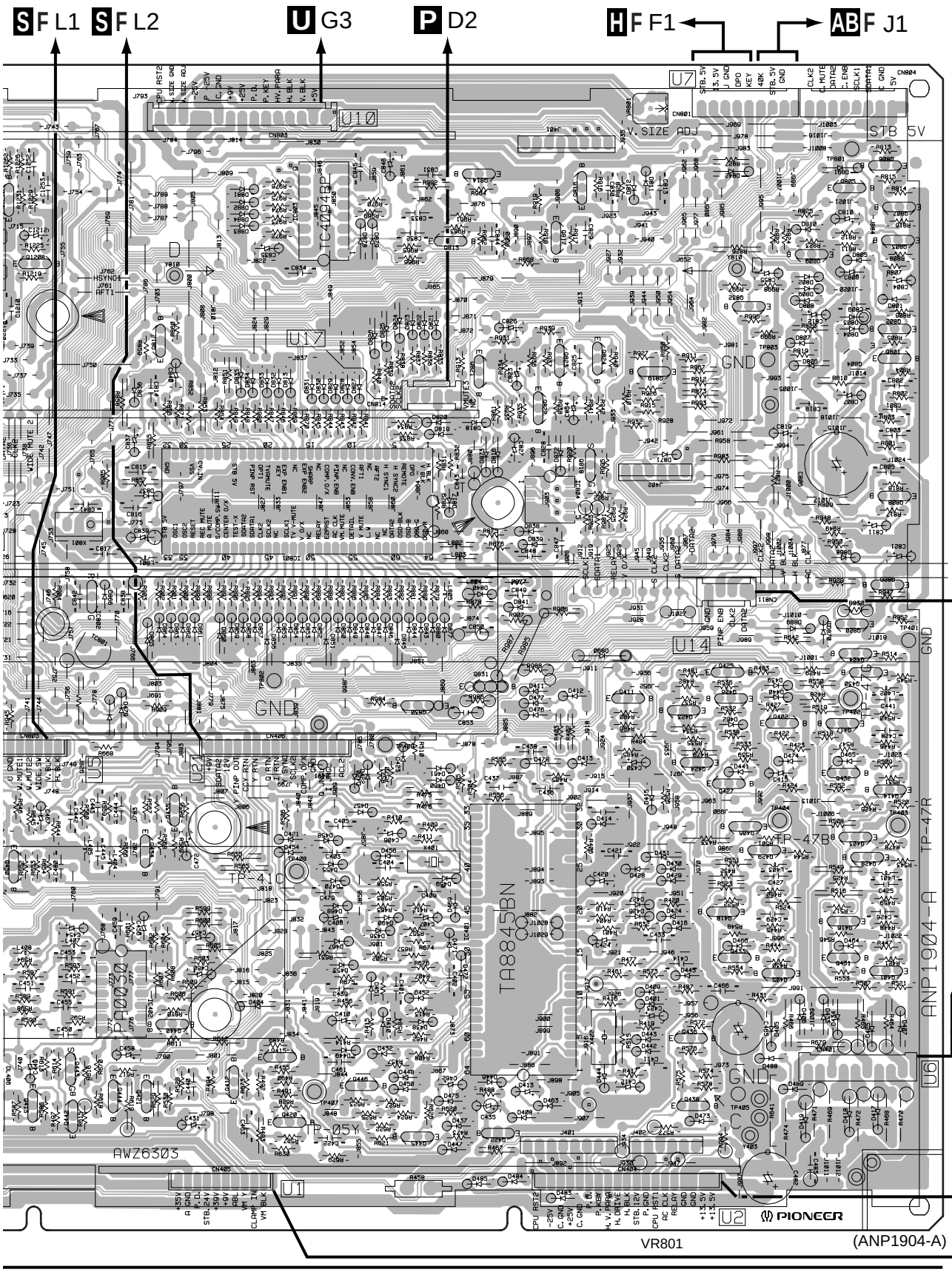


## 4.1 TUNER • VIDEO ASSY




IC1301 Q1201 Q1203 Q1204 Q1205 Q1210
IC1203 Q1304 Q1303 Q1301 Q1212 Q1213 Q1211 Q1206-Q1209 IC8
Q1360 Q1361 Q1354-Q1356 IC1353 IC403 Q827 Q825 Q451 Q450 I
Q1352 IC1351 Q1357 Q1363 Q1362 Q1351 Q437 Q452 Q407-Q410 Q447 Q419 Q439 Q441 Q413 Q

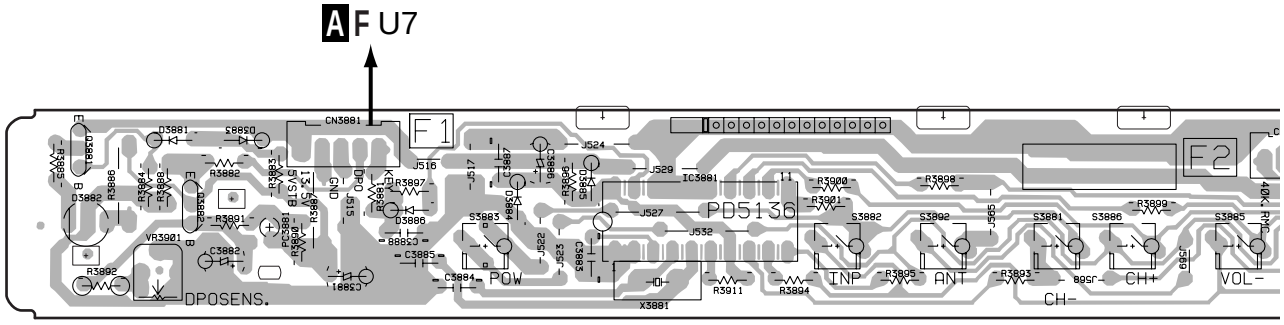
SIDE A



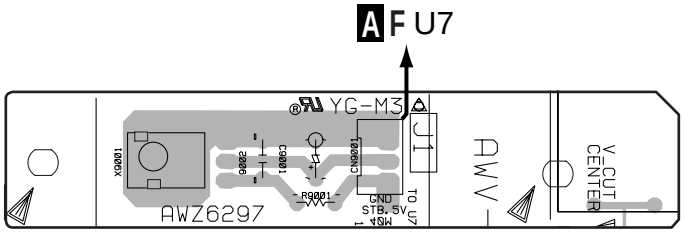

IC210 IC803 Q814 Q816 Q805-Q807
Q1208-Q1209 IC802 Q812 IC801 Q813 Q821-Q824 Q817 Q819 Q832 Q809 Q801-Q803
Q451 Q450 IC402 Q434 Q435 Q415 Q830 Q831 IC804 Q411 Q423-Q427 Q402 Q820 Q826 Q808
Q439 Q441 Q413 Q442-Q444 Q421 Q440 Q412 Q420 Q446 Q445 Q422 Q436 Q438 Q404 Q430 Q417
Q433 Q432 Q414 Q403 Q428
Q405 Q416 Q431 Q401

## 4.2 FRONT CONTROL and IR RECEIVER ASSEMBLIES

### HF FRONT CONTROL ASSY

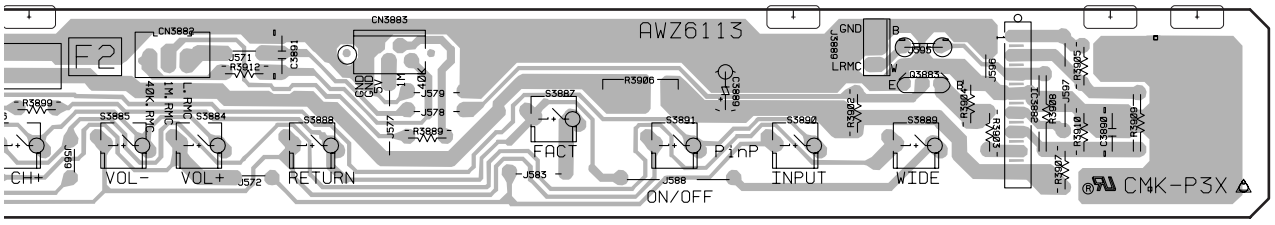



### ABF IR RECEIVER ASSY




(ANP1904-A)

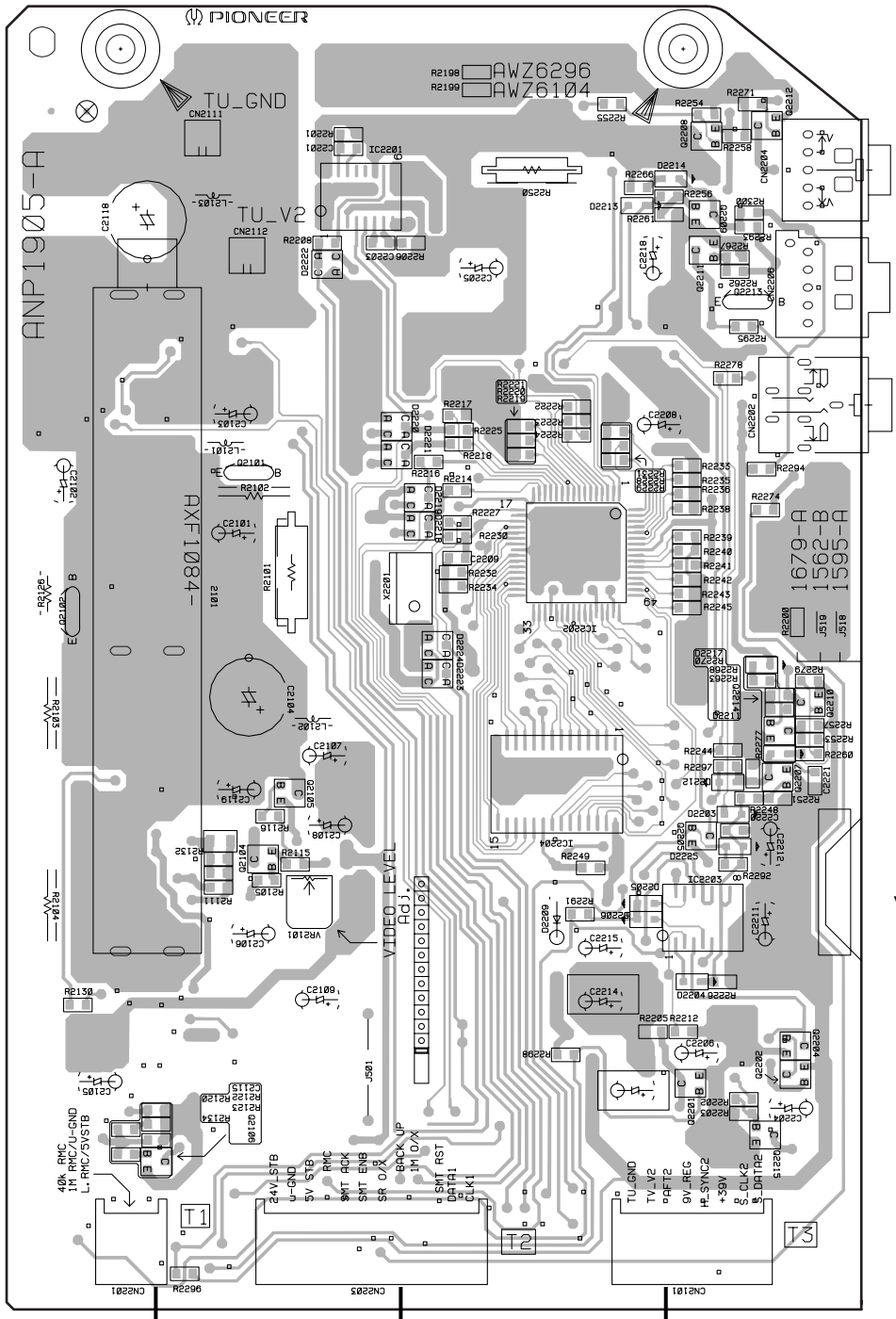
**SIDE A**


AWZ6113
F2
CH+
VOL−
VOL+
RETURN
FACT
ON/OFF
PinP
INPUT
WIDE
CMK-P3X

(ANP1850-C)

## 4.3 TUNER 2 ASSY

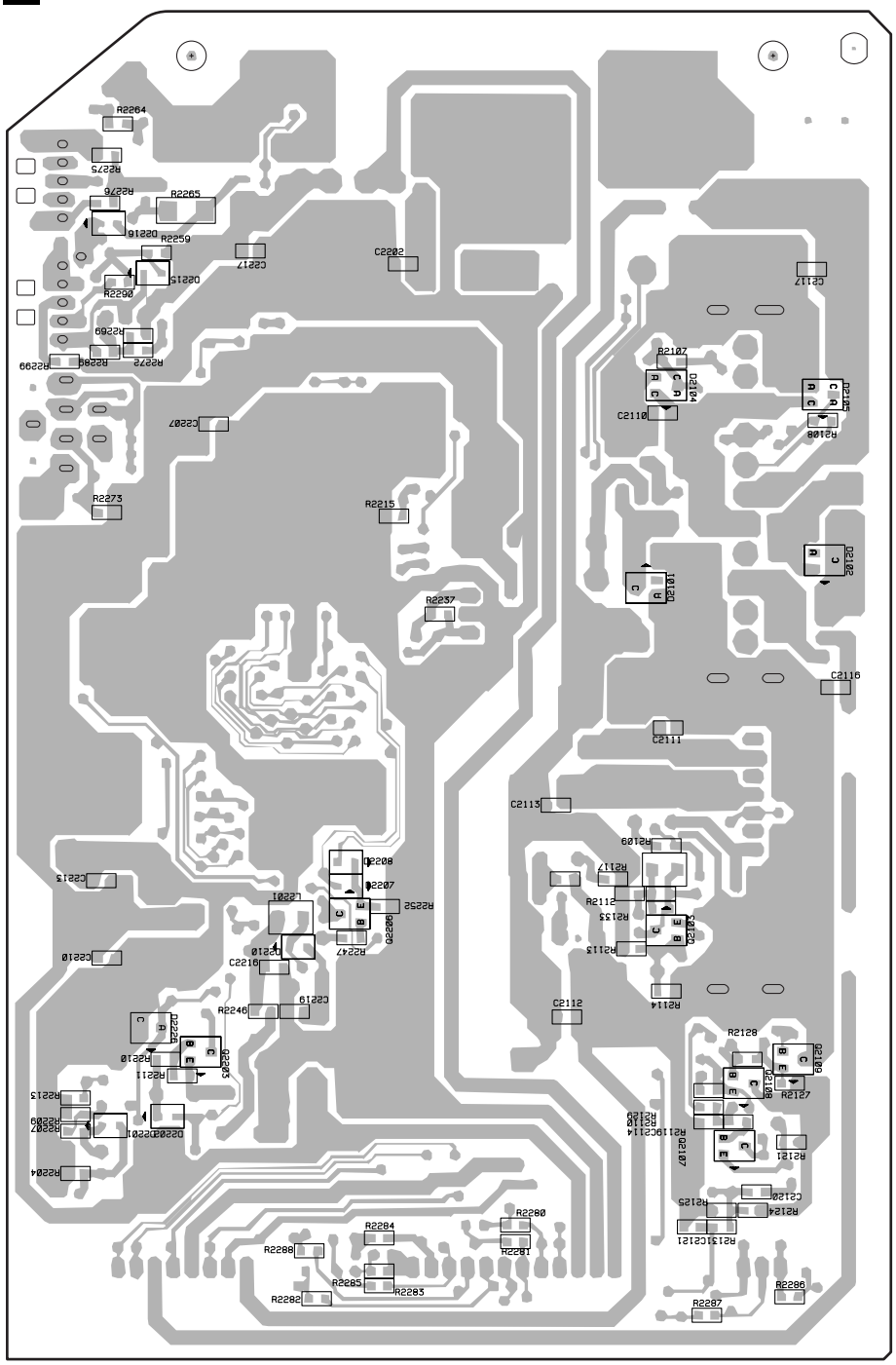
KF TUNER 2 ASSY




(ANP1905-A)

AF U18 AF U19 AF U20

# KF TUNER 2 ASSY



Q2206 Q2103

Q2203

Q2107-Q2109

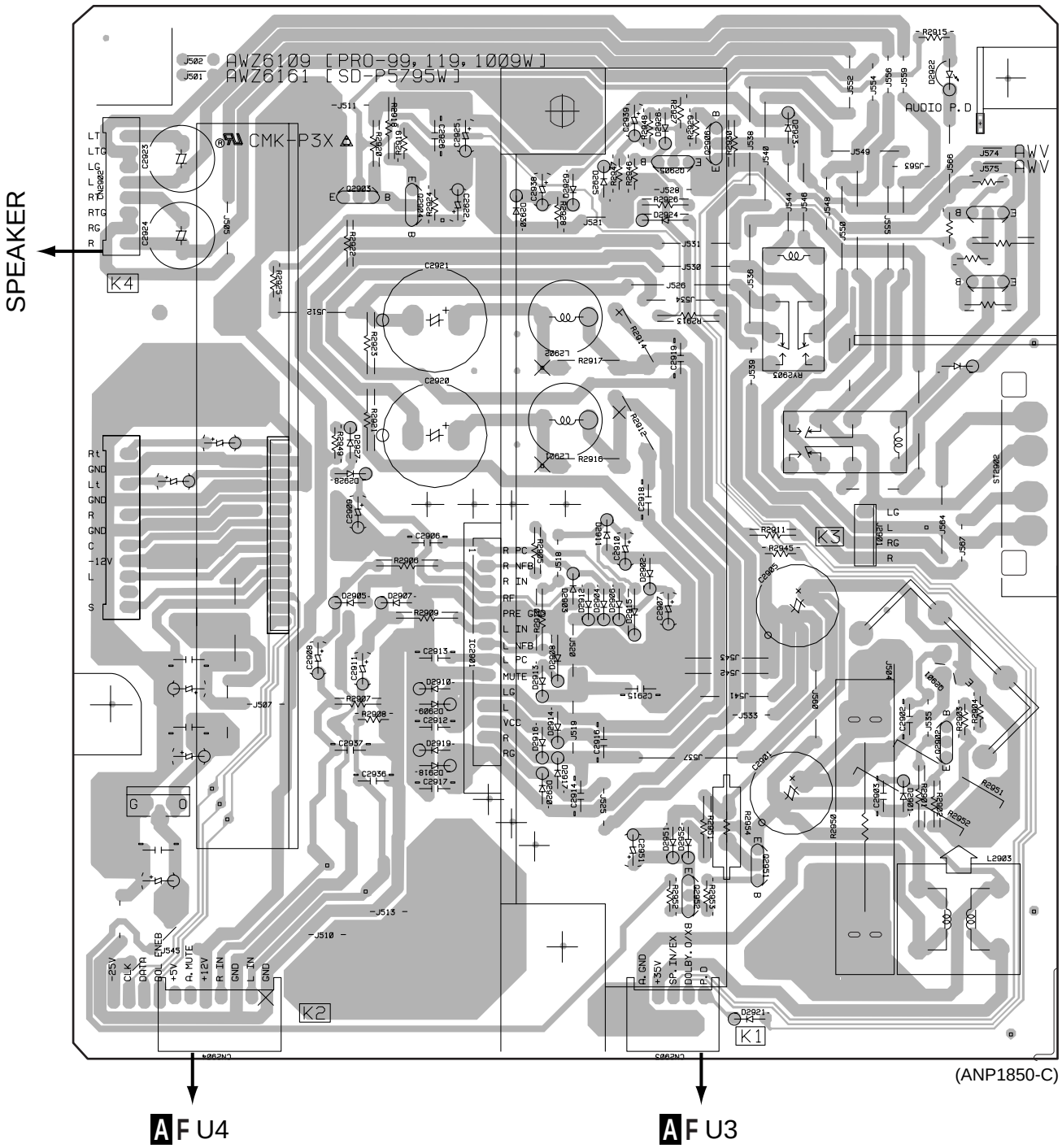
(ANP1905-A)

SIDE B

## 4.4 AUDIO ASSY

QF AUDIO ASSY

Q2904 IC2901 Q2905 Q2906 Q2952 Q2951 Q2901 Q2902

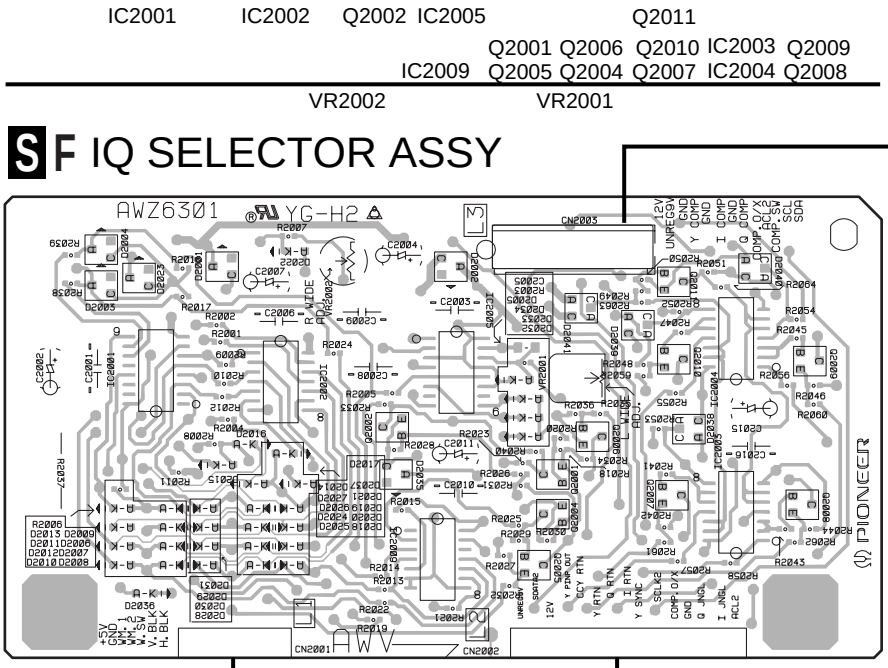


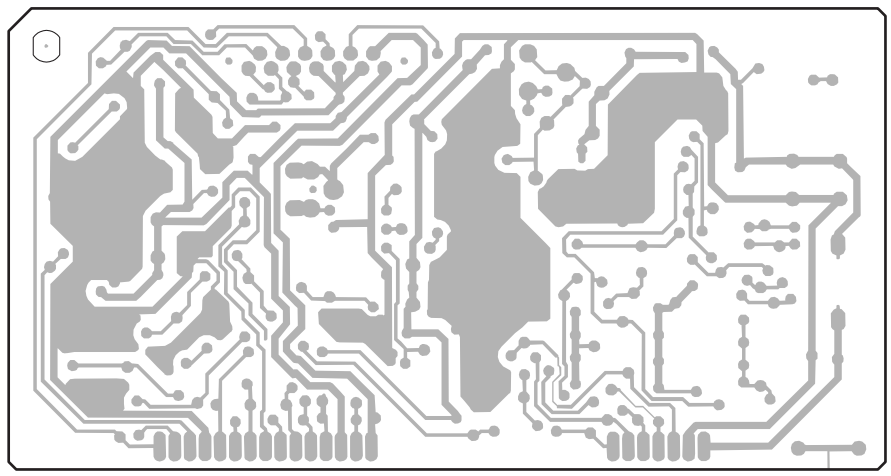

AF U4

AF U3

SIDE A

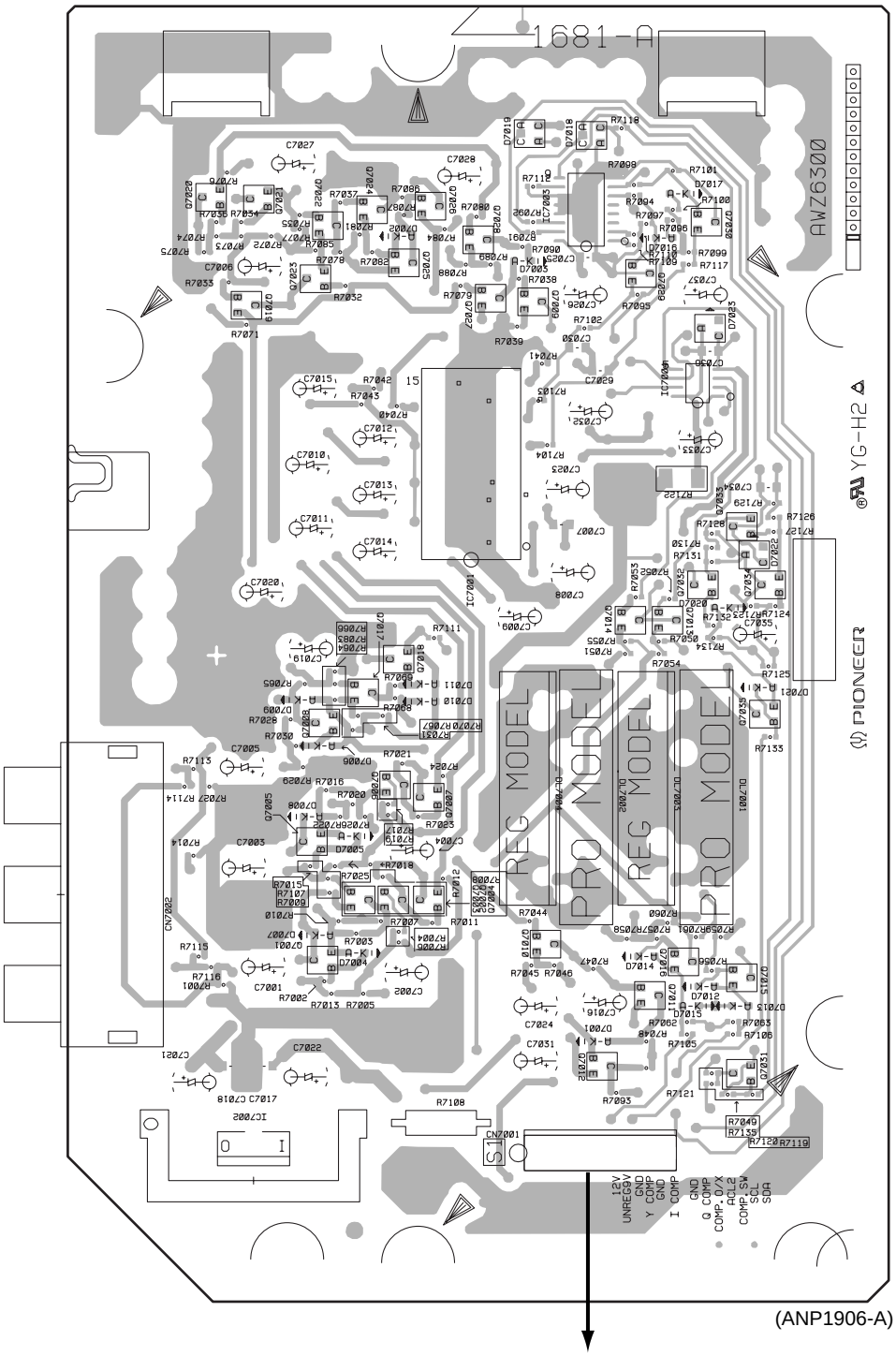
## 4.5 IQ SELECTOR ASSY



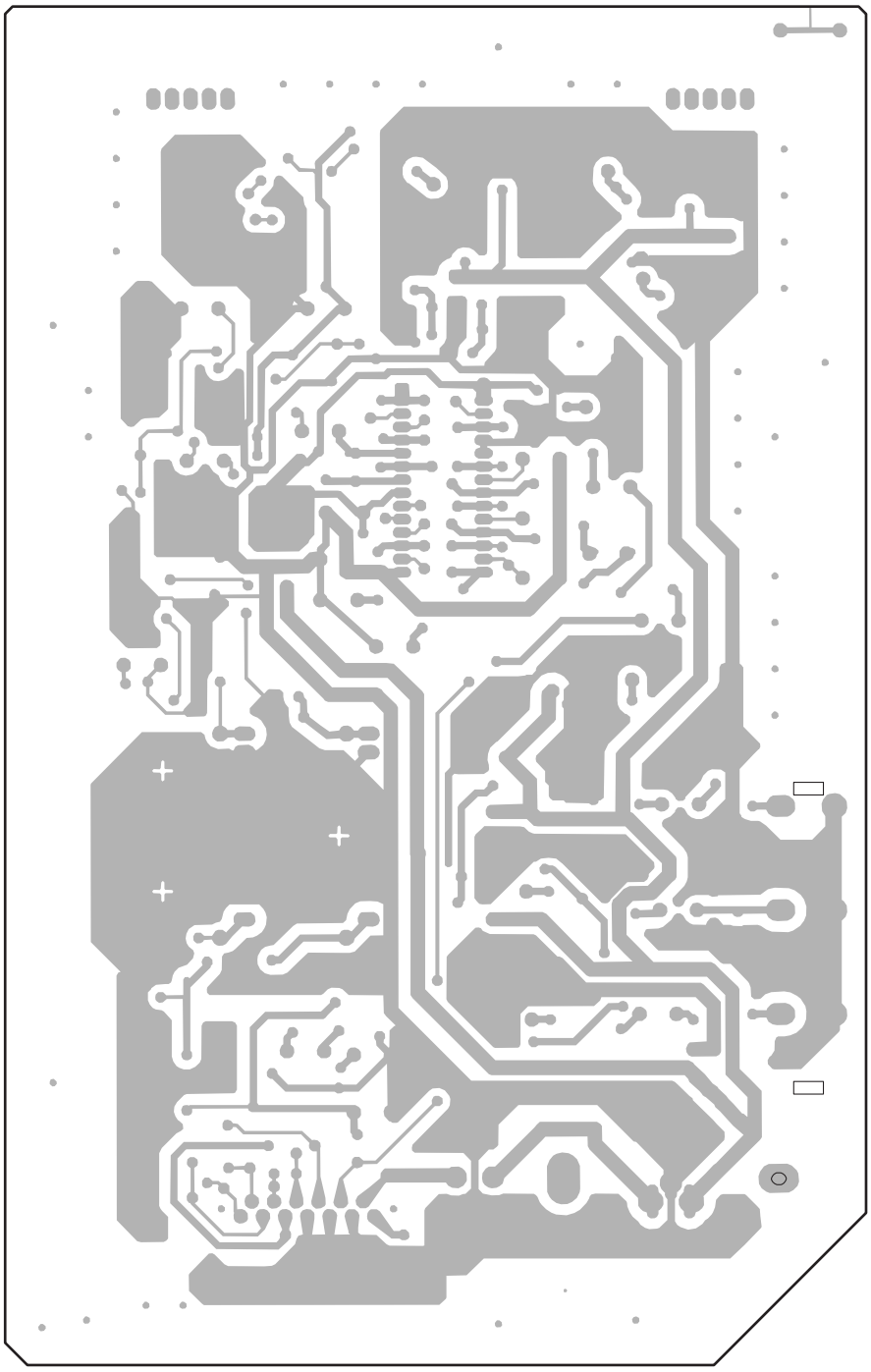
## 4.6 COMPONENT ASSY

### ACF COMPONENT ASSY




**SIDE A**

## ACF COMPONENT ASSY

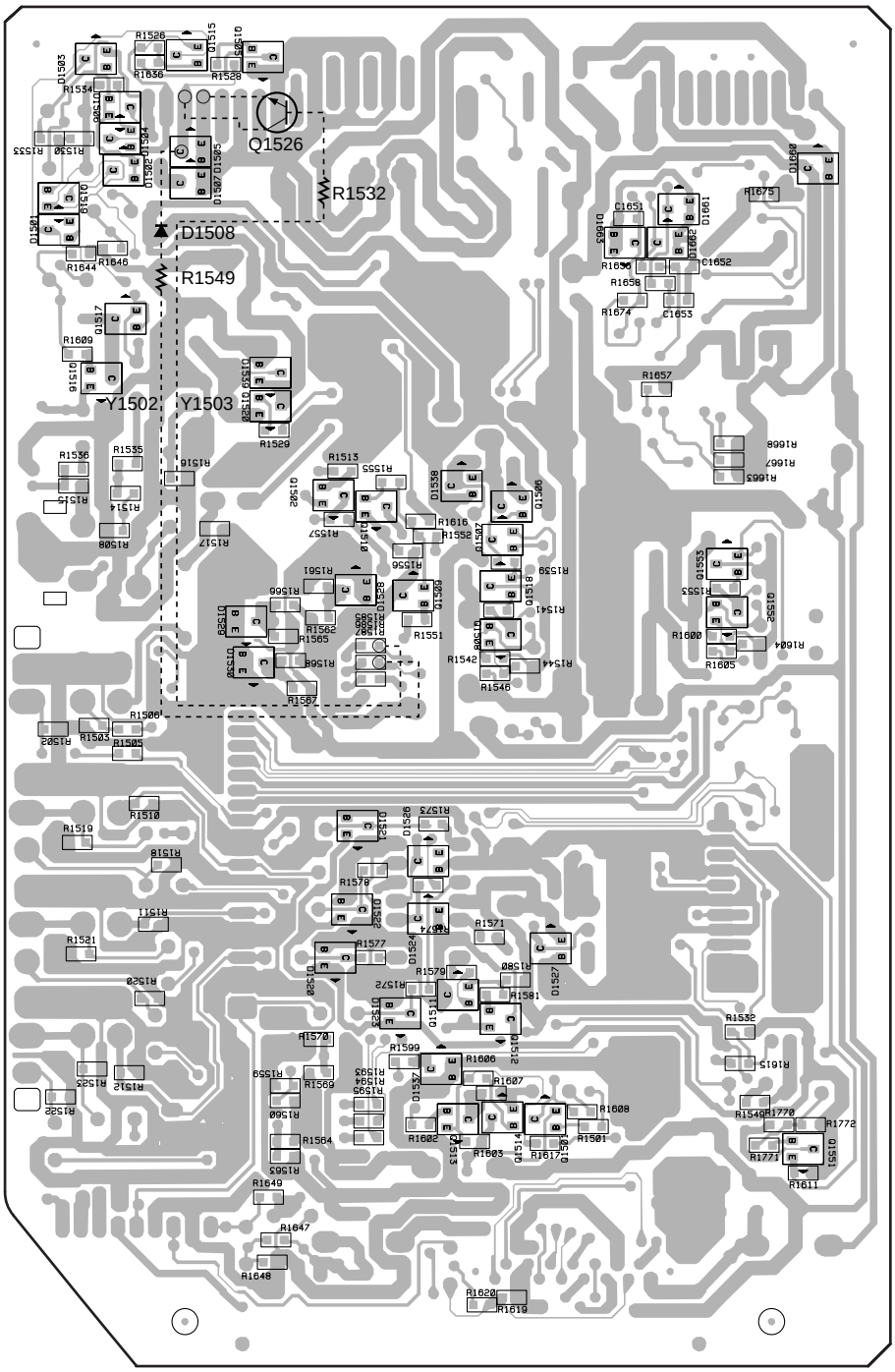


(ANP1906-A)

**SIDE B**

## 4.7 AV I/O ASSY

### BF AV I/O ASSY




Q1515 Q1505
Q1519
Q1517
Q1516 Q1520
Q1506 Q1507
Q1509 Q1518 Q1522 Q1508
Q1511 Q1512
Q1513 Q1514 Q1551 Q1501

(ANP1847-C)

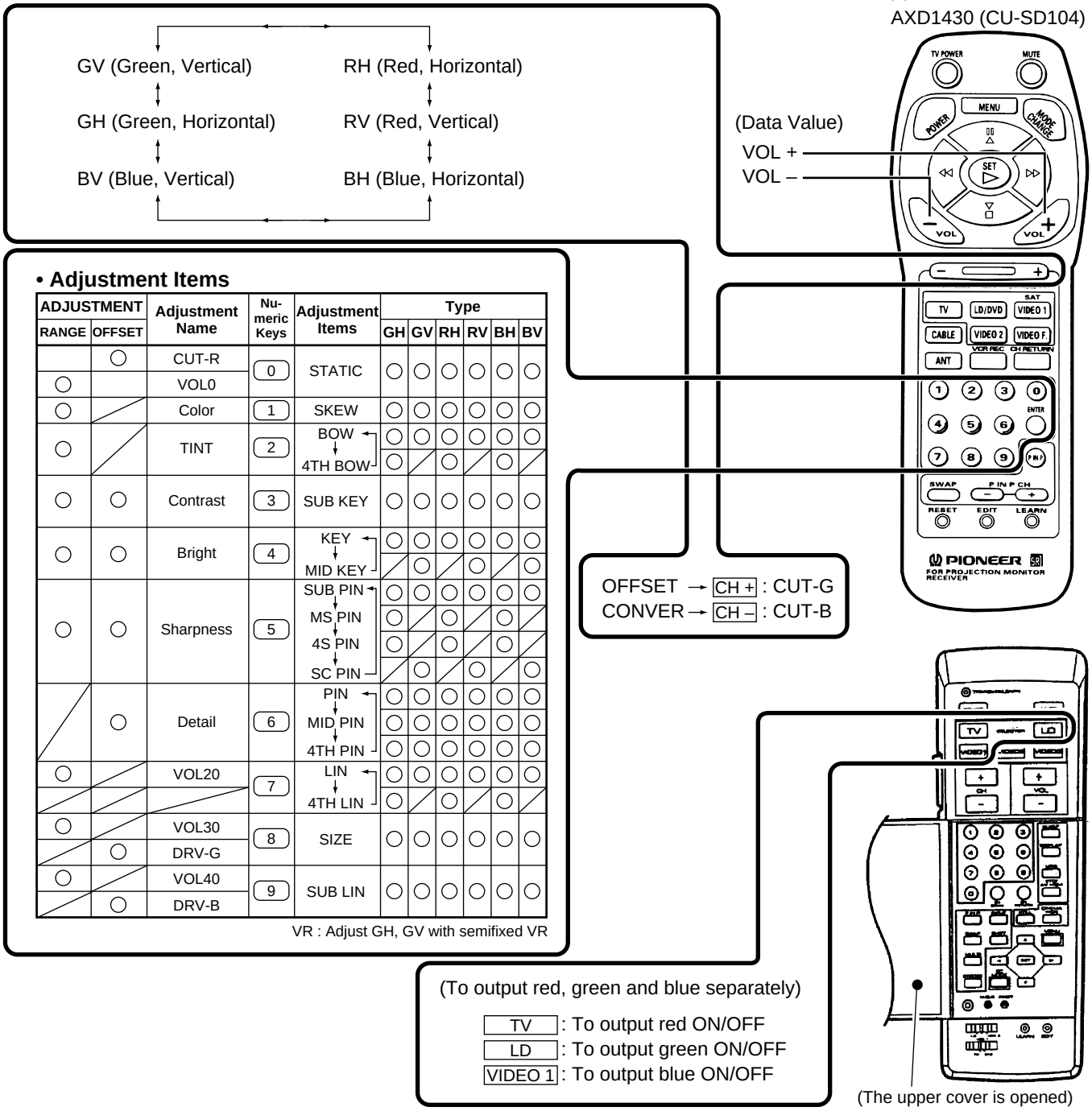
**SIDE B**

# 5. ADJUSTMENT

Attention: Only the part which is different from the PRO-119 and PRO-99 is mentioned.
For information other than that found in this manual, refer to the service manual (ARP2936) of the PRO-119 and PRO-99.
A point to give a ★ mark has just become a change toward the PRO-119 and PRO-99.

## ■ Key Indication of The Remote Control Unit

★
AXD1430 (CU-SD104)


GV (Green, Vertical)
RH (Red, Horizontal)
GH (Green, Horizontal)
RV (Red, Vertical)
BV (Blue, Vertical)
BH (Blue, Horizontal)
(Data Value)
VOL +
VOL –
OFFSET → CH + : CUT-G
CONVER → CH – : CUT-B
(To output red, green and blue separately)
TV : To output red ON/OFF
LD : To output green ON/OFF
VIDEO 1 : To output blue ON/OFF
(The upper cover is opened)

### • Adjustment Items

| ADJUSTMENT RANGE | ADJUSTMENT OFFSET | Adjustment Name | Numeric Keys | Adjustment Items | Type GH | GV | RH | RV | BH | BV |
|---|---|---|---|---|---|---|---|---|---|---|
| | ○ | CUT-R | 0 | STATIC | ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | | VOL0 | | | | | | | | |
| ○ | ／ | Color | 1 | SKEW | ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ／ | TINT | 2 | BOW | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | 4TH BOW | ○ | ／ | ○ | ／ | ○ | ／ |
| ○ | ○ | Contrast | 3 | SUB KEY | ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | Bright | 4 | KEY | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | MID KEY | ／ | ○ | ／ | ○ | ／ | ○ |
| ○ | ○ | Sharpness | 5 | SUB PIN | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | MS PIN | ○ | ／ | ○ | ／ | ○ | ／ |
| | | | | 4S PIN | ○ | ／ | ○ | ／ | ○ | ／ |
| | | | | SC PIN | ／ | ○ | ／ | ○ | ／ | ○ |
| ／ | ○ | Detail | 6 | PIN | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | MID PIN | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | 4TH PIN | ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ／ | VOL20 | 7 | LIN | ○ | ○ | ○ | ○ | ○ | ○ |
| ／ | ／ | ／ | | 4TH LIN | ○ | ／ | ○ | ／ | ○ | ／ |
| ○ | ／ | VOL30 | 8 | SIZE | ○ | ○ | ○ | ○ | ○ | ○ |
| ／ | ○ | DRV-G | | | | | | | | |
| ○ | ／ | VOL40 | 9 | SUB LIN | ○ | ○ | ○ | ○ | ○ | ○ |
| ／ | ○ | DRV-B | | | | | | | | |

VR : Adjust GH, GV with semifixed VR

Note :
This unit can not operate by the ISC remote control unit (CU-SD100, etc.).

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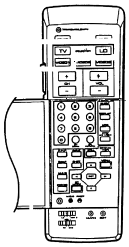
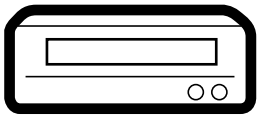
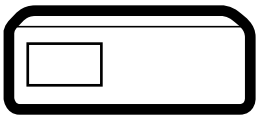
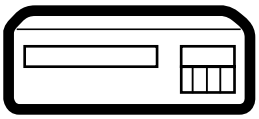
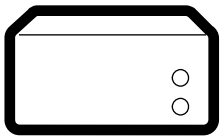
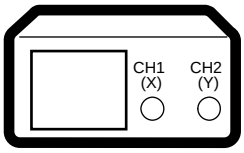
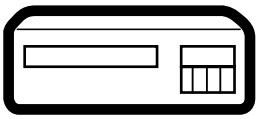
## ■ Jigs and Measuring Instruments

Attention: A point to give a ★ mark has just become a change toward the PRO-119 and PRO-99.

| | | | |
|---|---|---|---|
| ★ Remote control unit (CU-SD104) |  Remote control unit for servicing AXD1352 (CU-SD076) | ⊖ Screwdriver | ⊖ Adjustment screwdriver |
|  Color bar generator (If possible, with component video output) |  D. DC Voltmeter |  LD Player |  Monoscope |
|   Dual-trace oscilloscope | Frequency counter | ★  DVD Player with component video output | ★ DVD Disc (If possible, test disc with color bar signal) |

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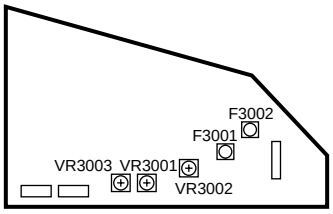
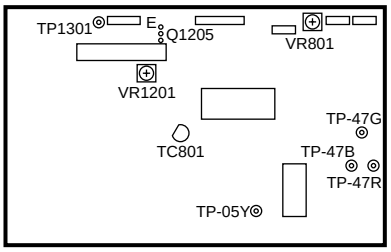
Attention: A point to give a ★ mark has just become a change toward the PRO-119 and PRO-99.

## ■ Assembly Adjustment Location and Items

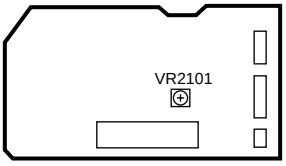
Ⓐ P IN P ASSY



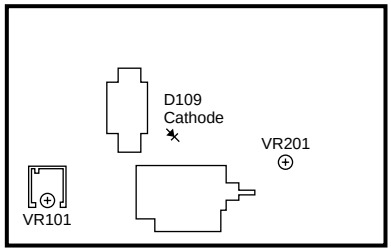

Ⓑ TUNER • VIDEO ASSY



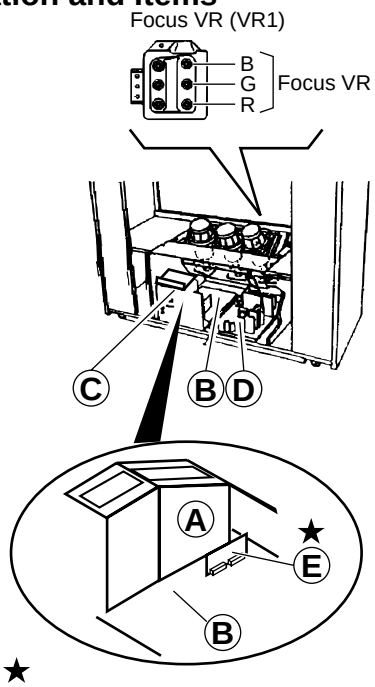

★ Ⓒ TUNER 2 ASSY



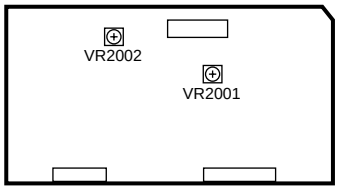

Ⓓ POWER SUPPLY ASSY

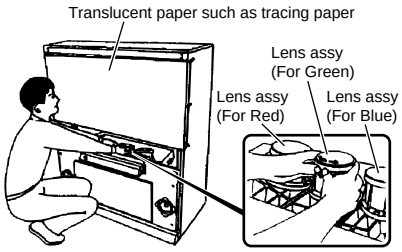


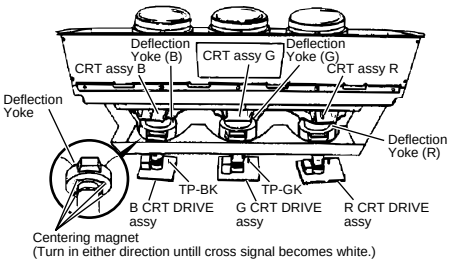

Focus VR (VR1)




★ Ⓔ IQ SELECTOR ASSY



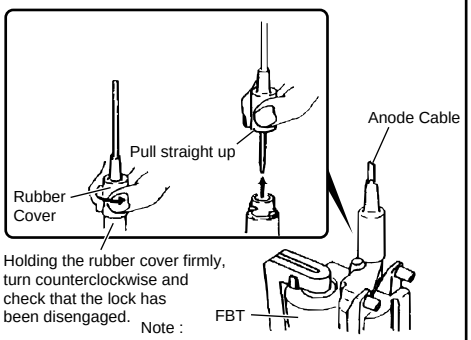




### MEASURING METHOD

Disconnect the FBT anode cable as shown below.
Measure at the point where the cable enters the FBT.

Caution : Take extra precaution when measuring the voltage. High voltage are also present in surrounding circuit boards. (CRT DRIVE assy, POWER SUPPLY assy)

**SERVICEMAN WARNING**
Before removing the anode cable, turn off the power, unplug the AC plug and let the unit discharge for more than 1 minut.




Note :
When reconnecting the cable, proceed in the reverse order. After reconnecting, tug on the cable to check that it is secure.

1. 135V Power supply adjustment
2. Contrast coarse adjustment
3. Brightness adjustment (PIONEER's standard setting)
4. Deflection yoke lean adjustment
5. Screen center adjustment
6. Focus adjustment of lens assy
7. Focus VR adjustment
8. Vertical size adjustment
9. Horizontal size adjustment
10. Convergence adjustment
11. Test cross H-Center position assy
12. Tuner block adjustment
13. White balance adjustment
14. PIONEER's standard settings
15. Y-signal level adjustment of sub-picture (adjustment for P IN P)
16. Tint adjustment of sub-picture (adjustment for P IN P)
17. Color level adjustment of sub-picture (adjustment for P IN P)
18. Write clock adjustment of sub-picture (adjustment for P IN P)
19. Read clock adjustment of sub-picture (adjustment for P IN P)
★ 20. CINEMA MUTE adjustment

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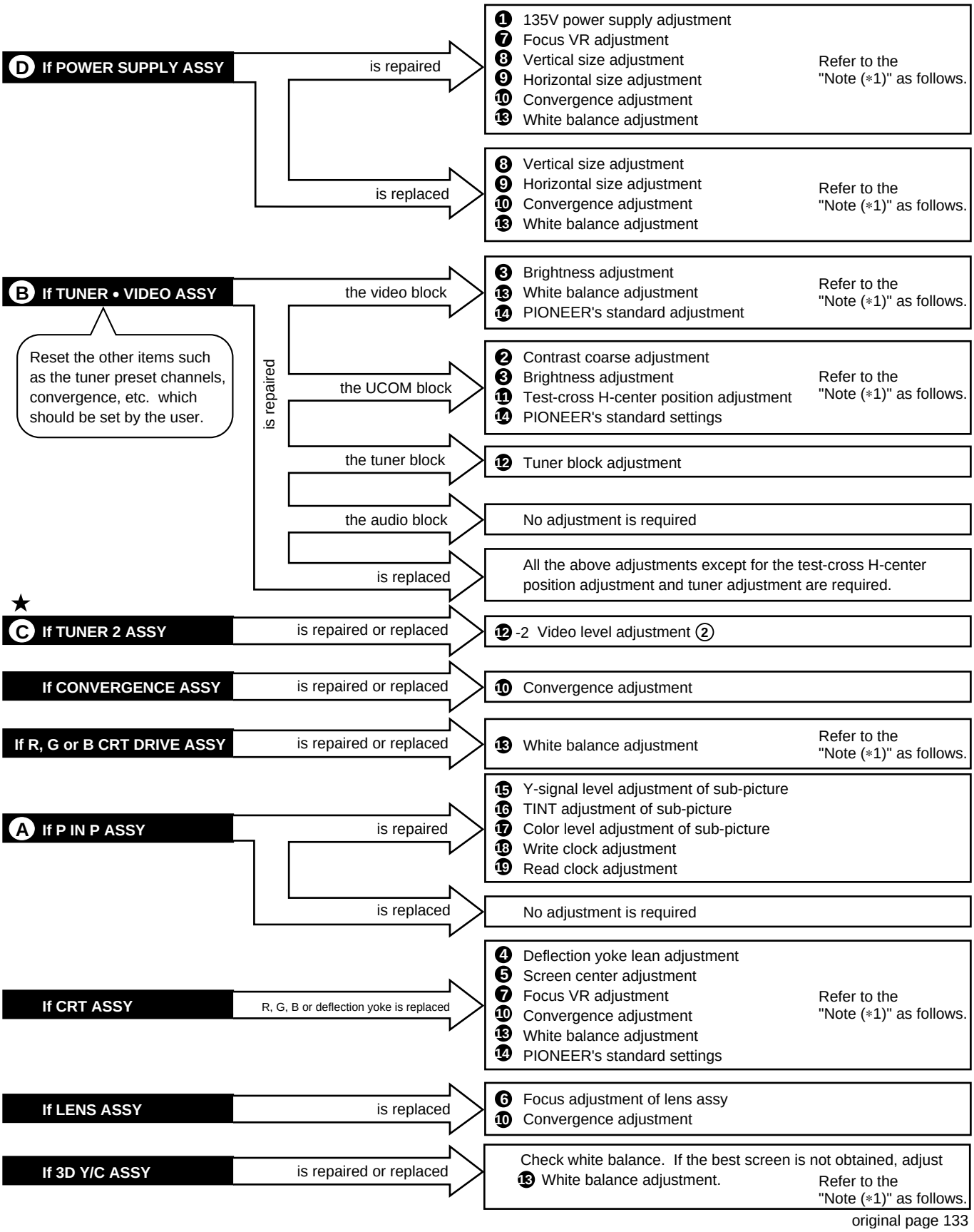
## ■ Assembly Adjustment Location Guide

Attention: A point to give a ★ mark has just become a change toward the PRO-119 and PRO-99.


D If POWER SUPPLY ASSY
is repaired
is replaced
1 135V power supply adjustment
7 Focus VR adjustment
8 Vertical size adjustment
9 Horizontal size adjustment
10 Convergence adjustment
13 White balance adjustment
Refer to the "Note (∗1)" as follows.
8 Vertical size adjustment
9 Horizontal size adjustment
10 Convergence adjustment
13 White balance adjustment
Refer to the "Note (∗1)" as follows.
B If TUNER • VIDEO ASSY
Reset the other items such as the tuner preset channels, convergence, etc. which should be set by the user.
is repaired
the video block
the UCOM block
the tuner block
the audio block
is replaced
3 Brightness adjustment
13 White balance adjustment
14 PIONEER's standard adjustment
Refer to the "Note (∗1)" as follows.
2 Contrast coarse adjustment
3 Brightness adjustment
11 Test-cross H-center position adjustment
14 PIONEER's standard settings
Refer to the "Note (∗1)" as follows.
12 Tuner block adjustment
No adjustment is required
All the above adjustments except for the test-cross H-center position adjustment and tuner adjustment are required.
★
C If TUNER 2 ASSY
is repaired or replaced
12 -2 Video level adjustment (2)
If CONVERGENCE ASSY
is repaired or replaced
10 Convergence adjustment
If R, G or B CRT DRIVE ASSY
is repaired or replaced
13 White balance adjustment
Refer to the "Note (∗1)" as follows.
A If P IN P ASSY
is repaired
is replaced
15 Y-signal level adjustment of sub-picture
16 TINT adjustment of sub-picture
17 Color level adjustment of sub-picture
18 Write clock adjustment
19 Read clock adjustment
No adjustment is required
If CRT ASSY
R, G, B or deflection yoke is replaced
4 Deflection yoke lean adjustment
5 Screen center adjustment
7 Focus VR adjustment
10 Convergence adjustment
13 White balance adjustment
14 PIONEER's standard settings
Refer to the "Note (∗1)" as follows.
If LENS ASSY
is replaced
6 Focus adjustment of lens assy
10 Convergence adjustment
If 3D Y/C ASSY
is repaired or replaced
Check white balance. If the best screen is not obtained, adjust
13 White balance adjustment.
Refer to the "Note (∗1)" as follows.

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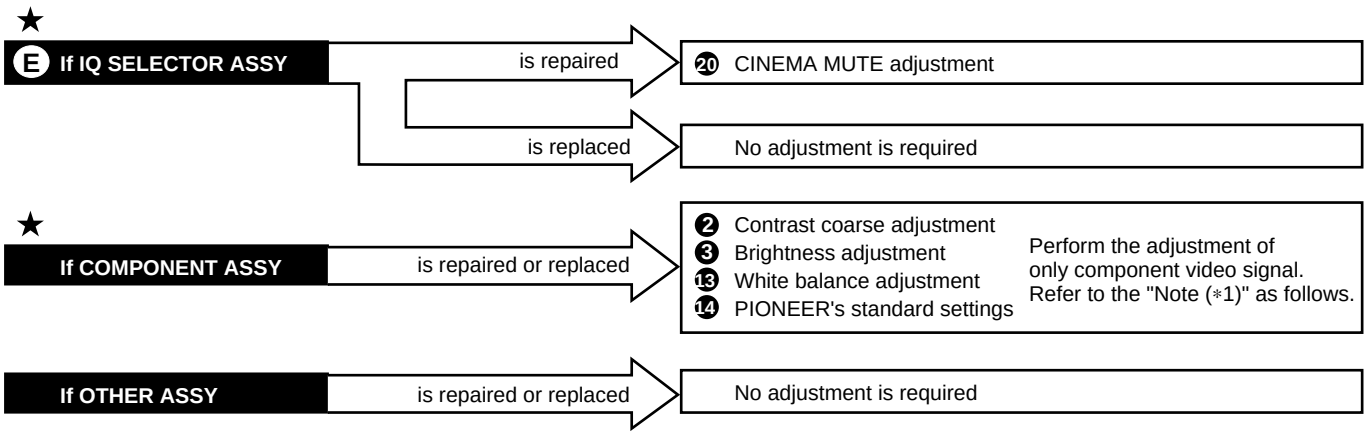


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Note (∗1):
For the adjustment of the steps 2,3,13 and 14, both adjustments of composite video signal and the component video signal is necessary.
• When the adjustment of the composite video signal is performed.
1. Input the COMPOSITE VIDEO signal to the VIDEO INPUT terminal.
2. Switch the video to the input of the composite video signal.
3. Perform the adjustment in accordance with the directions of the steps 2,3,13 and 14.

• When the adjustment of the component video signal is performed.
1. Input the COMPONENT VIDEO signal to the DVD COMPONENT VIDEO INPUT terminal.
   But, when the adjustment of the color is not performed (steps 2, 3, 13, 14-1 and 14-2),
   you may input the signal (without color burst and chroma) which took out Y signal from the composite signal to the Y input of component.
2. Switch the video to the input (LD/DVD) of the component video signal.
3. Perform the adjustment in accordance with the directions of the steps 2,3,13 and 14.
   But, for the part with the directions of pressing the [▼] (DOWN) button, press the [SWAP] button to the substitute.

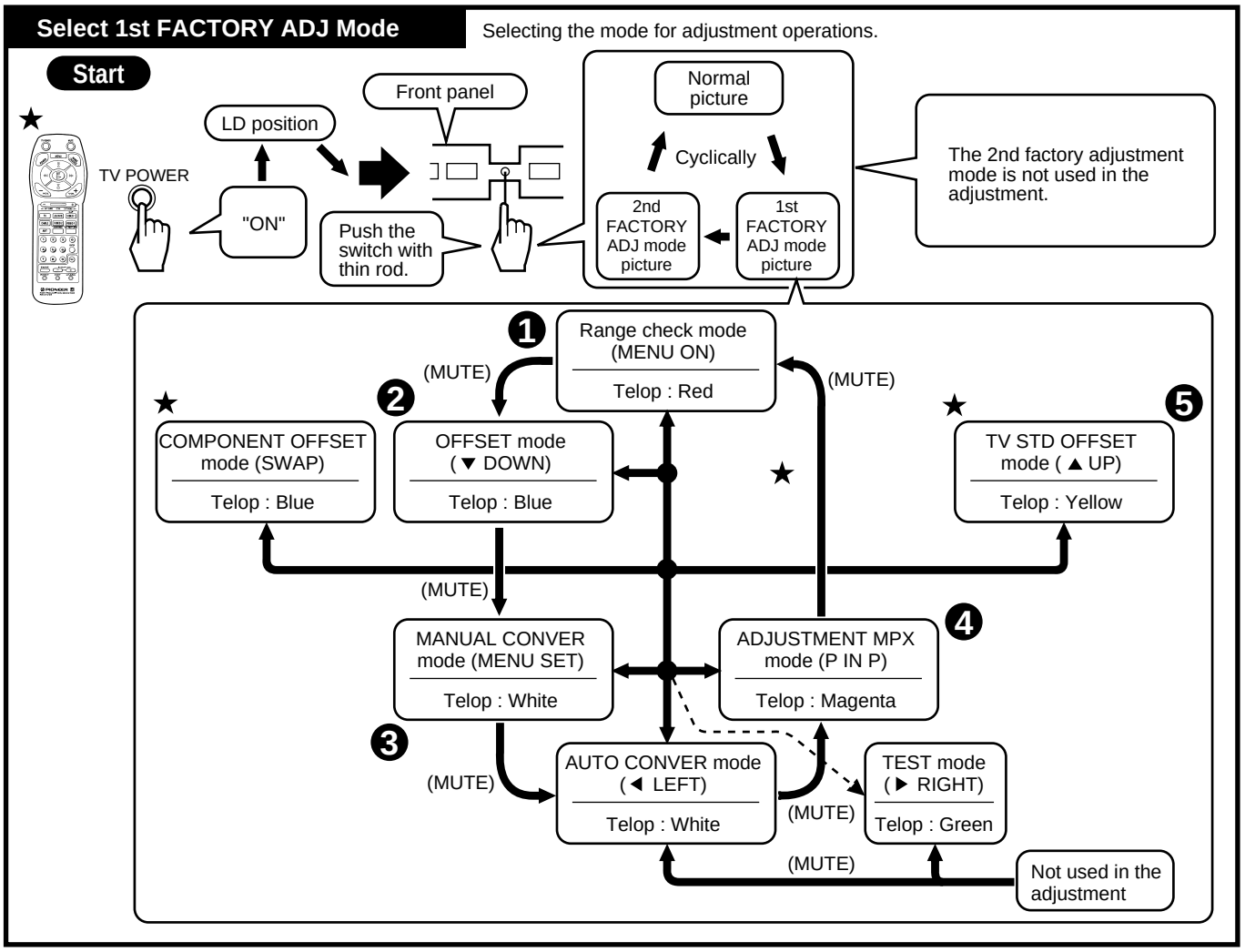
Note : Be sure to adjust the composite video signal first.

## ■ Factory ADJ Mode

Attention: A point to give a ★ mark has just become a change toward the PRO-119 and PRO-99.

**Start** .....Start adjusting

**1st FAC** .....Select 1st factory adjustment mode, then adjust

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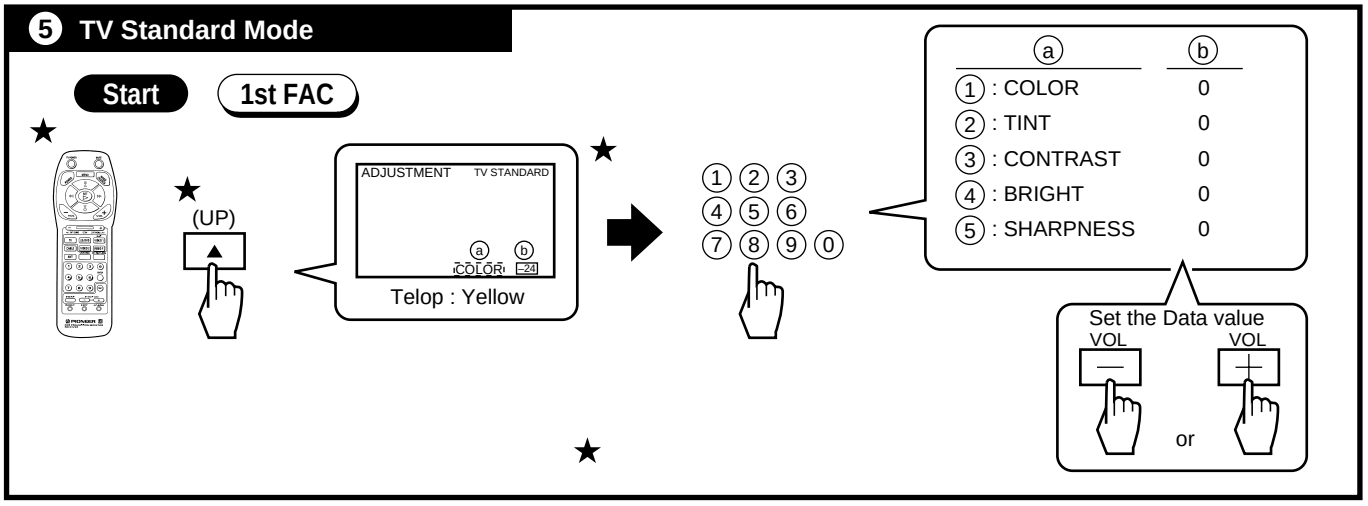


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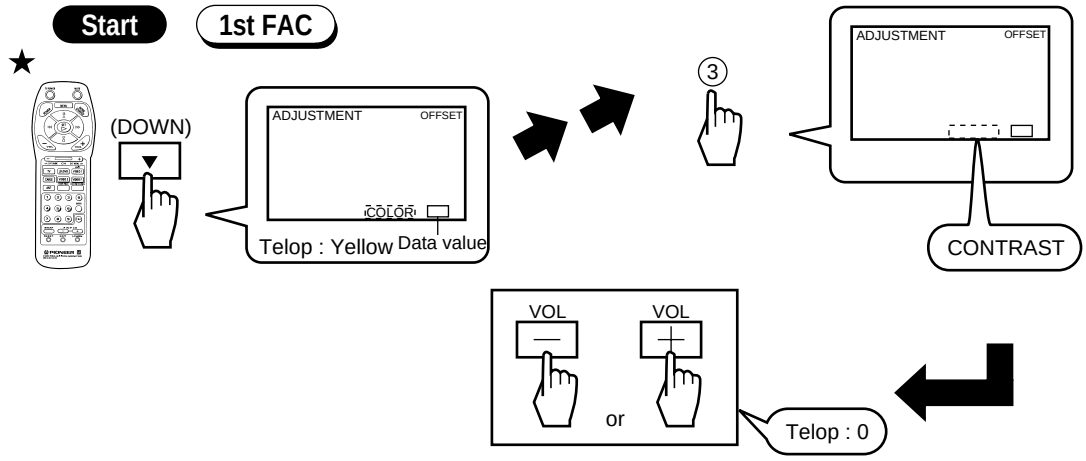
Attention: A point to give a ★ mark has just become a change toward the PRO-119 and PRO-99.

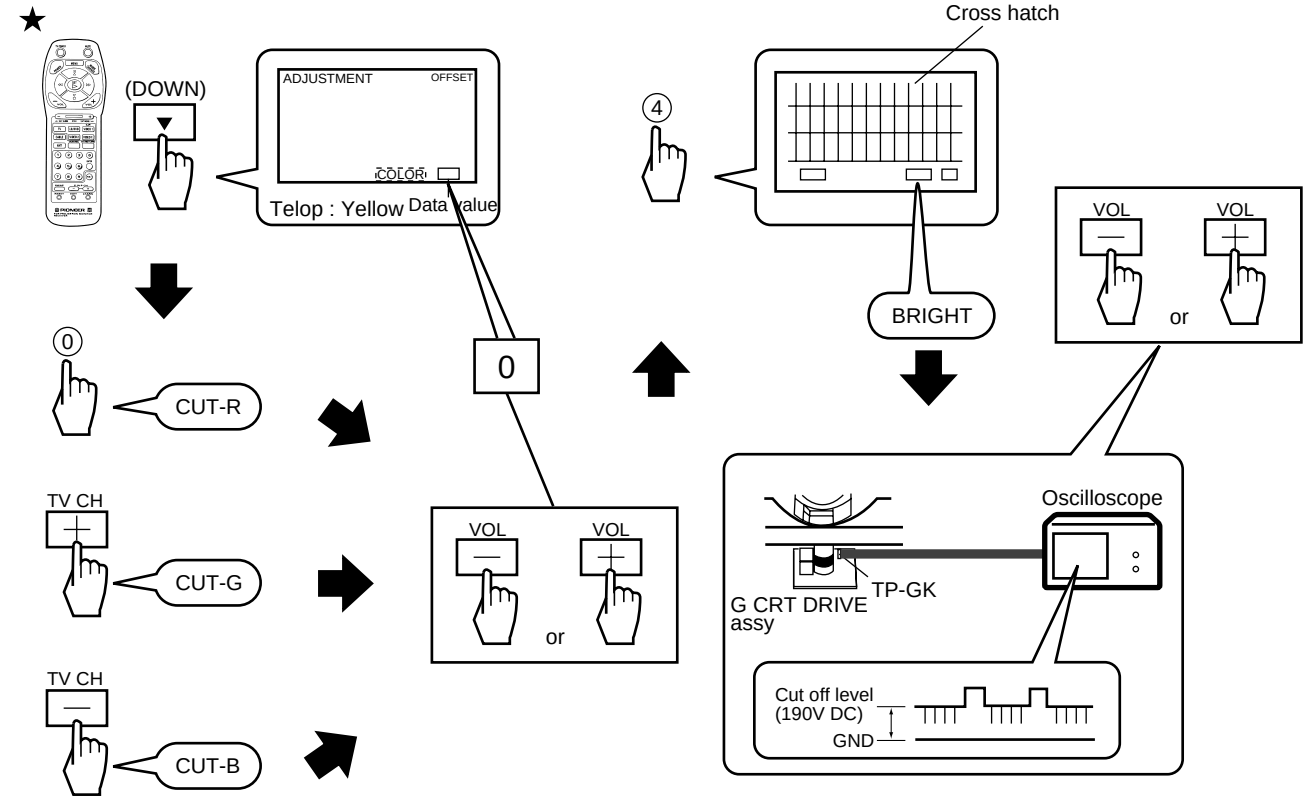
## 2 Contrast coarse adjustment

Refer to the "Note (∗1)" on page 53.




## 3 Brightness adjustment (PIONEER's standard settings)

Refer to the "Note (∗1)" on page 53.

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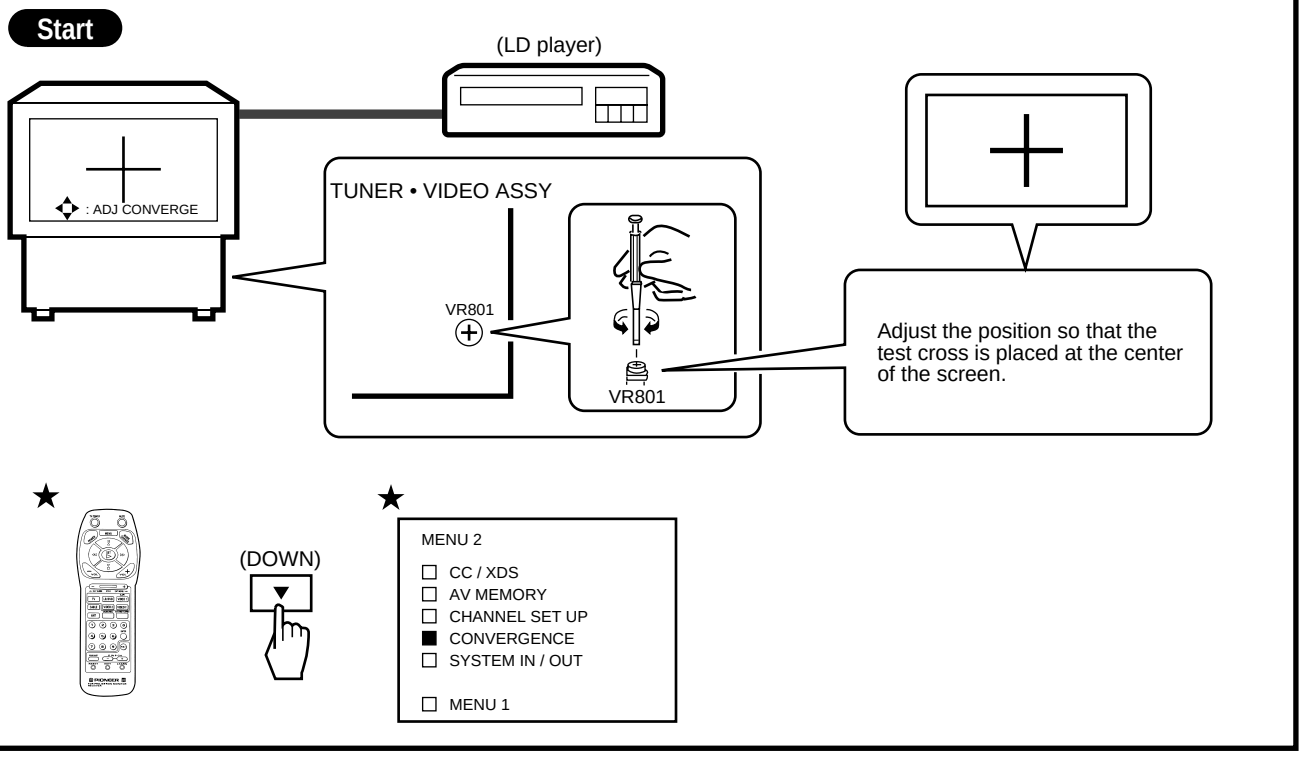
## 11 Test cross H-center position adjustment

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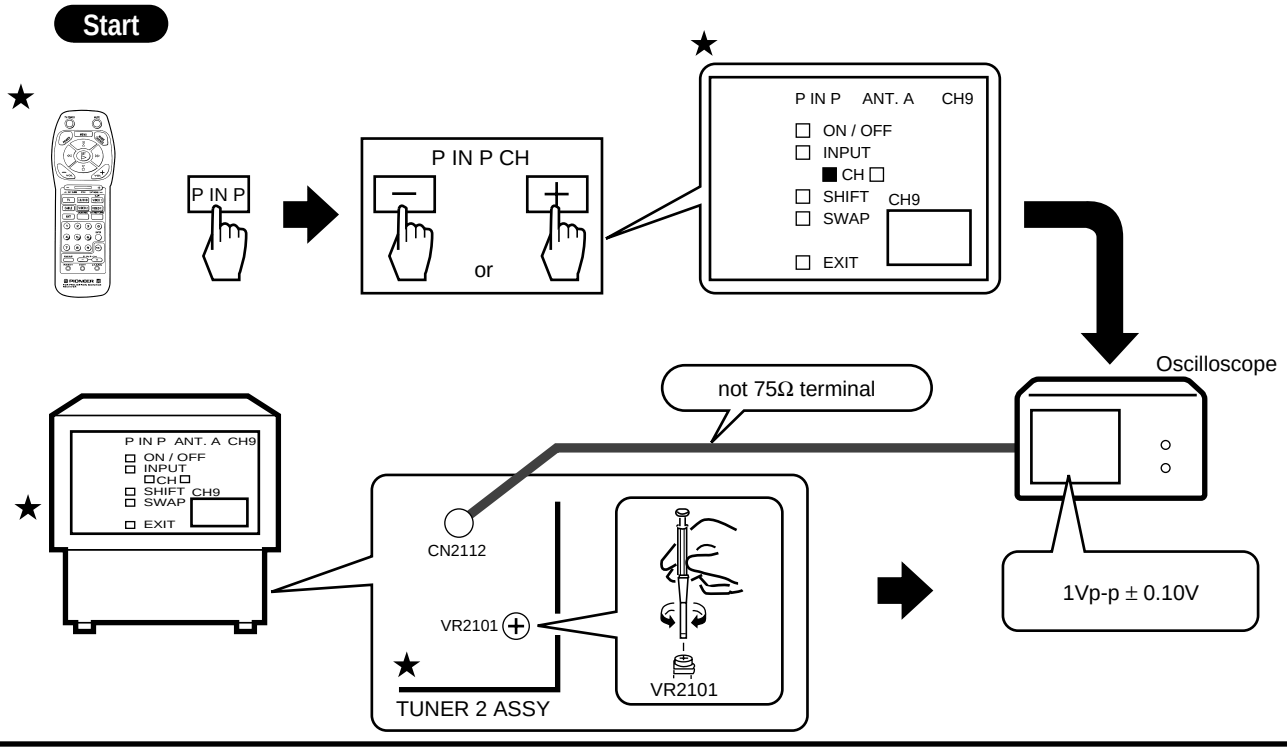
## 12-2 Video level adjustment (2)

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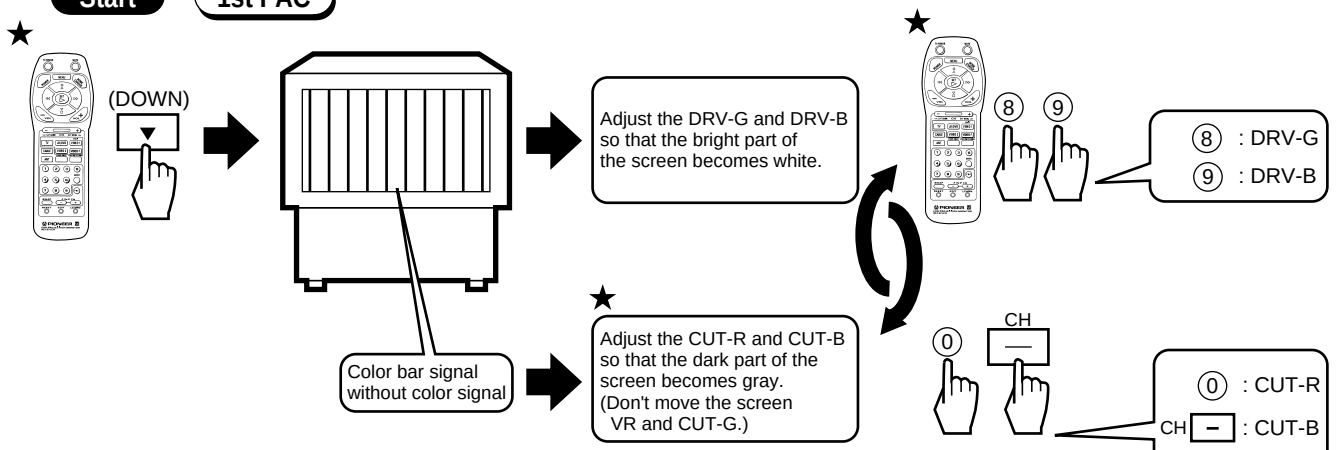
## 13 White balance adjustment

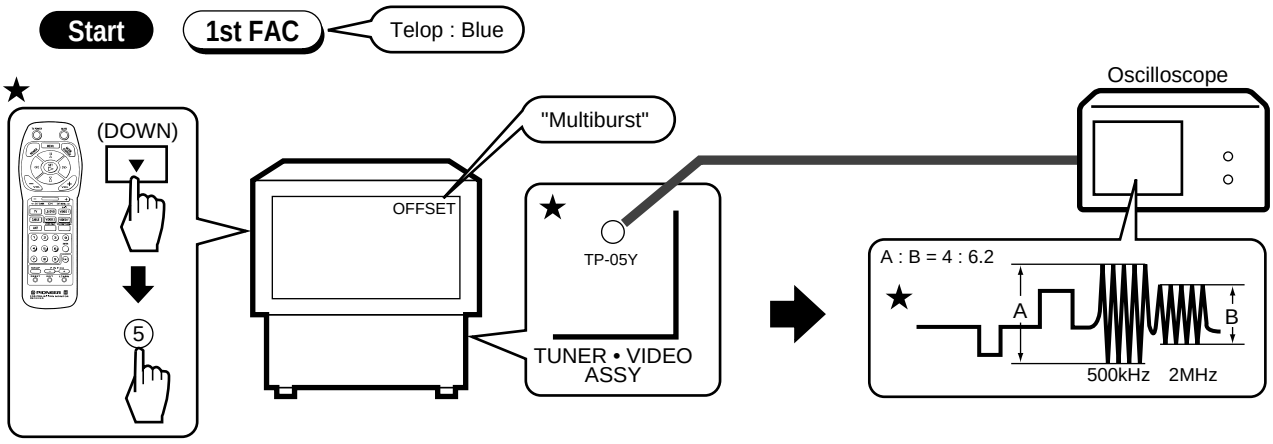
Refer to the "Note (∗1)" on page 53.


Start
1st FAC
(DOWN)
Adjust the DRV-G and DRV-B so that the bright part of the screen becomes white.
8 9
8 : DRV-G
9 : DRV-B
Color bar signal without color signal
Adjust the CUT-R and CUT-B so that the dark part of the screen becomes gray. (Don't move the screen VR and CUT-G.)
CH
0
0 : CUT-R
CH – : CUT-B

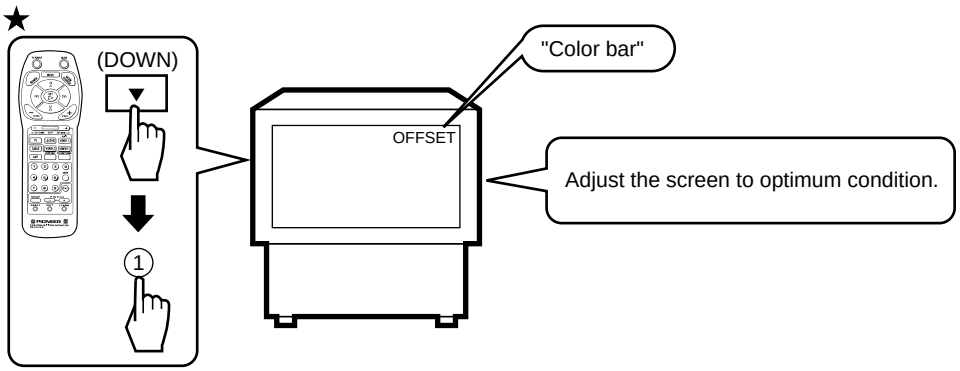
## 14 PIONEER's standard settings

Refer to the "Note (∗1)" on page 53.

### 14-1 Sharpness adjustment




### 14-2 Color adjustment

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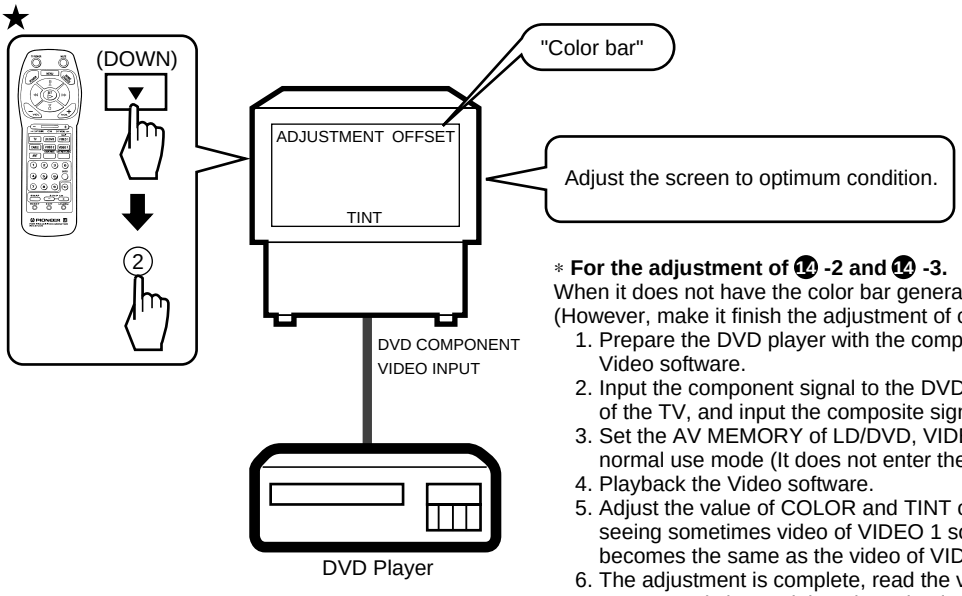
## 14 -3 Tint adjustment

Start → 1st FAC




∗ **For the adjustment of 14 -2 and 14 -3.**
When it does not have the color bar generator with component video output. (However, make it finish the adjustment of composite video in advance.)

1. Prepare the DVD player with the component video output and the Video software.
2. Input the component signal to the DVD COMPONENT VIDEO INPUT of the TV, and input the composite signal to the VIDEO 1 INPUT.
3. Set the AV MEMORY of LD/DVD, VIDEO 1 to the STANDARD in the normal use mode (It does not enter the FACTORY ADJ mode.)
4. Playback the Video software.
5. Adjust the value of COLOR and TINT of PICTURE of MENU1 with seeing sometimes video of VIDEO 1 so that the video (color) of LD/DVD becomes the same as the video of VIDEO 1.
6. The adjustment is complete, read the value of COLOR and TINT in the MENU, and change it into the value in FACTORY in accordance with the following table.

| | In MENU | –30 | –15 | +15 | +30 |
|---|---|---|---|---|---|
| In FACTORY | COLOR | 2Steps | 2Steps | 2Steps | |
| | TINT | 2Steps | | | |

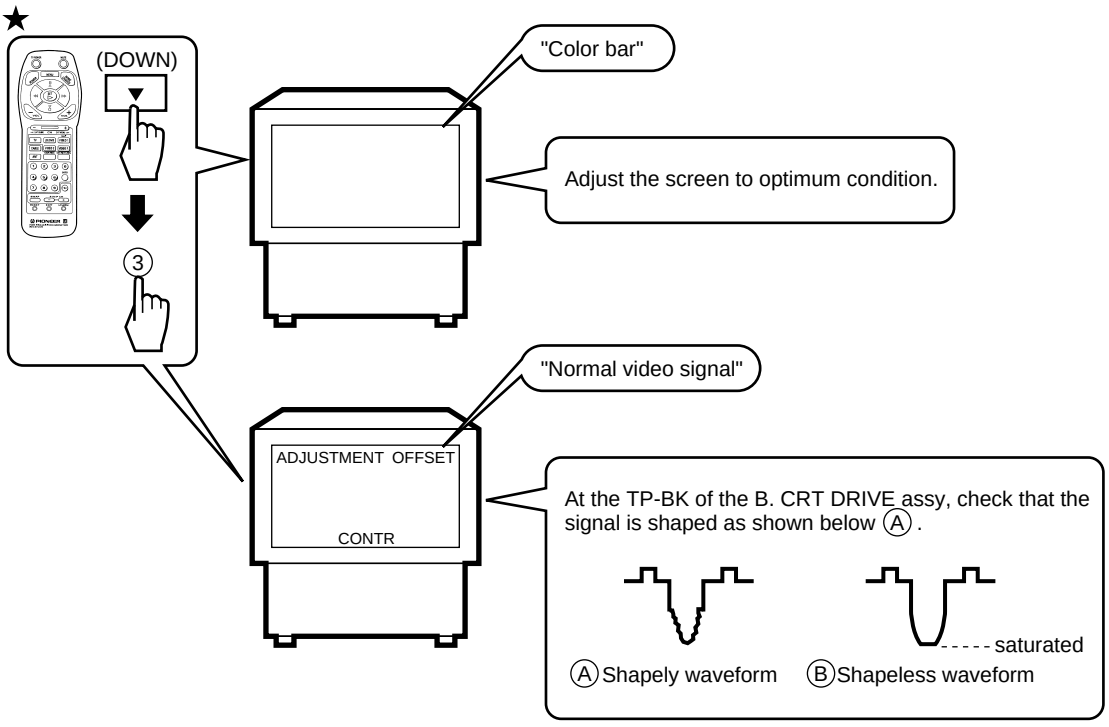
Example:

| MENU | FACTORY |
|---|---|
| COLOR +17 | +19 |
| TINT –5 | –10 |

7. Input the changed value to COLOR and TINT of the component offset in the FACTORY ADJ mode. (End)

## 14 -4 Contrast adjustment

Start → 1st FAC

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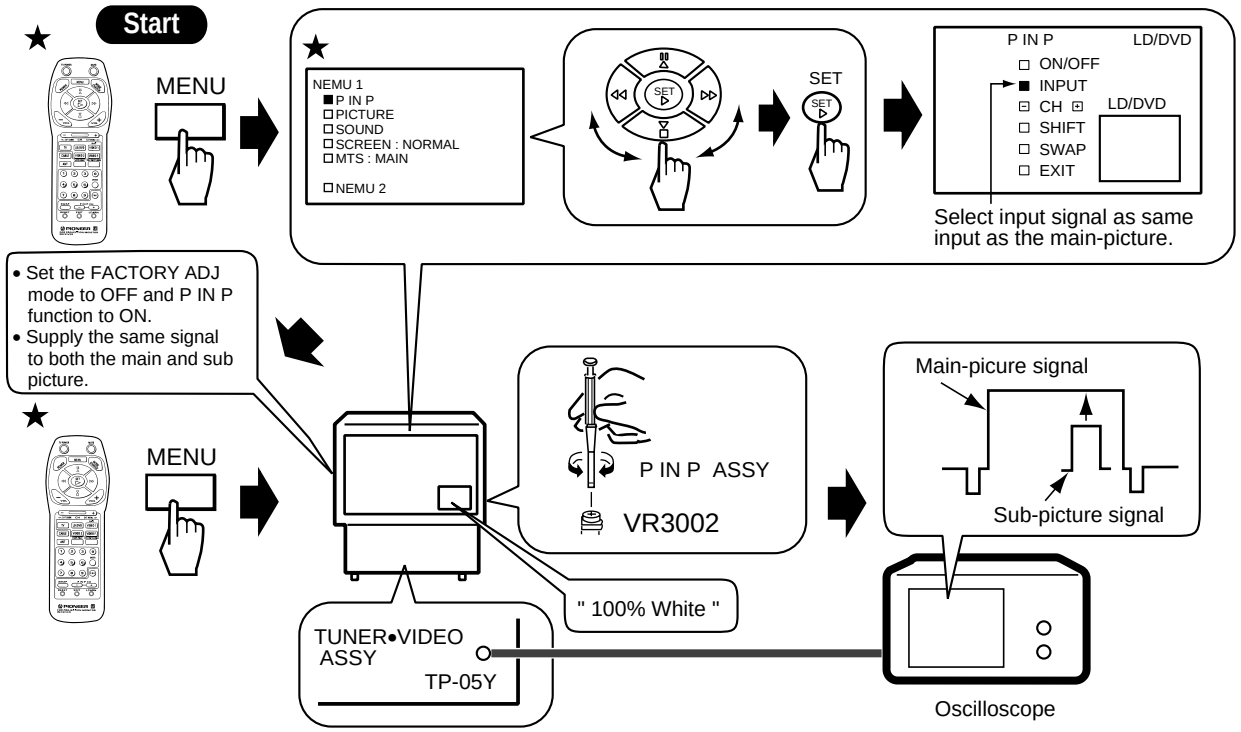
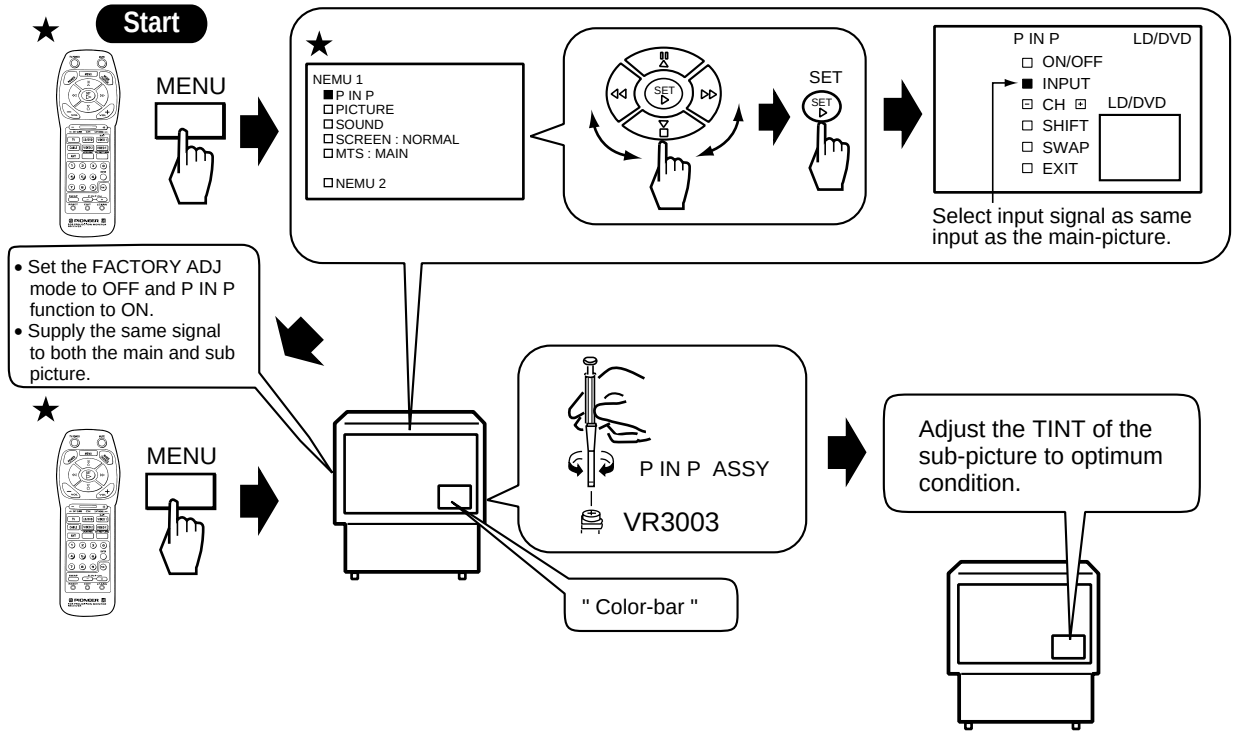
## 15 Y-signal level adjustment of sub-picture (adjustment for P IN P)




## 16 TINT adjustment of sub-picture (adjustment for P IN P)

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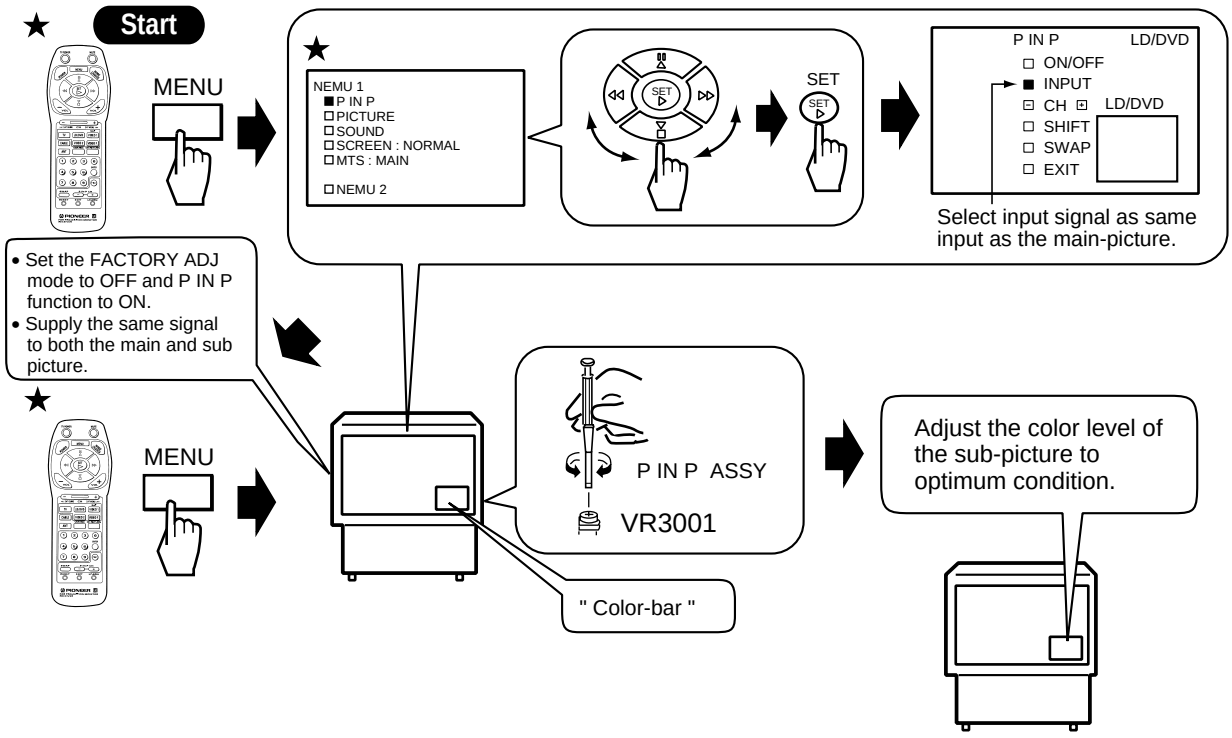
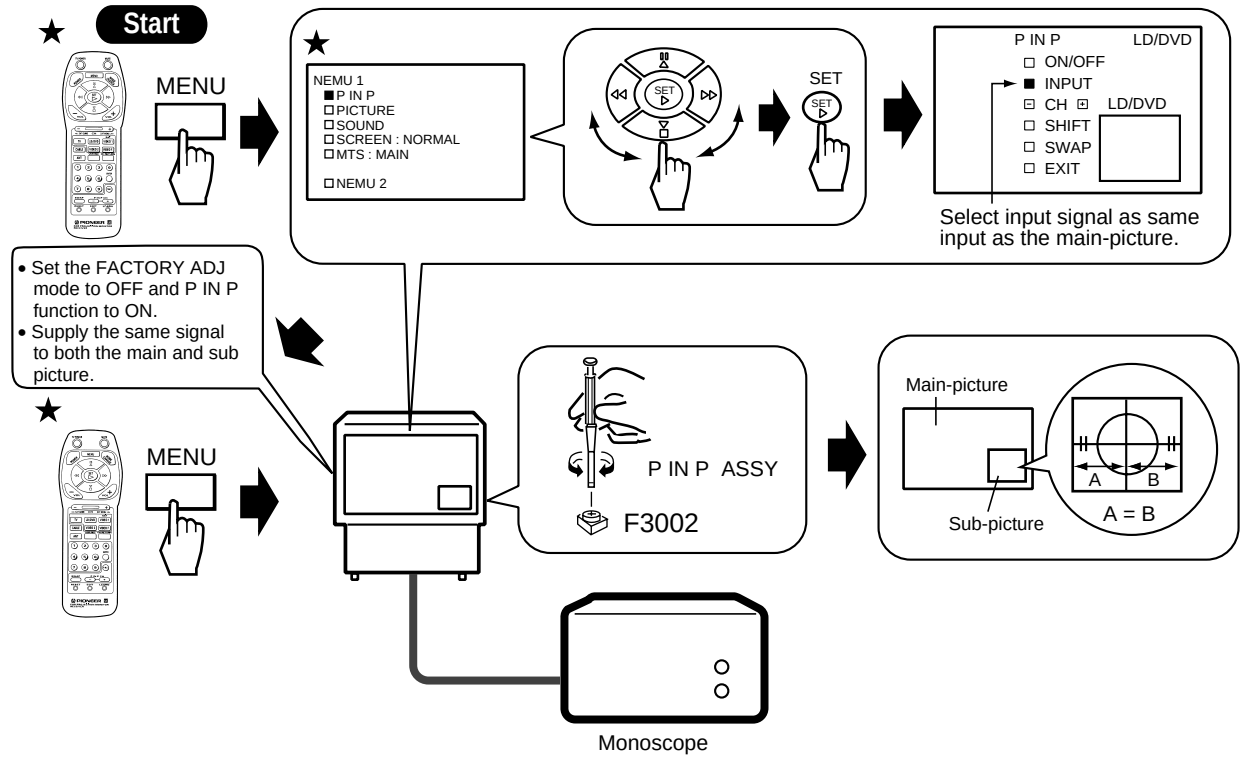
## 17 Color level adjustment of sub-picture (adjustment for P IN P)




## 18 Write clock adjustment of sub-picture (adjustment for P IN P)

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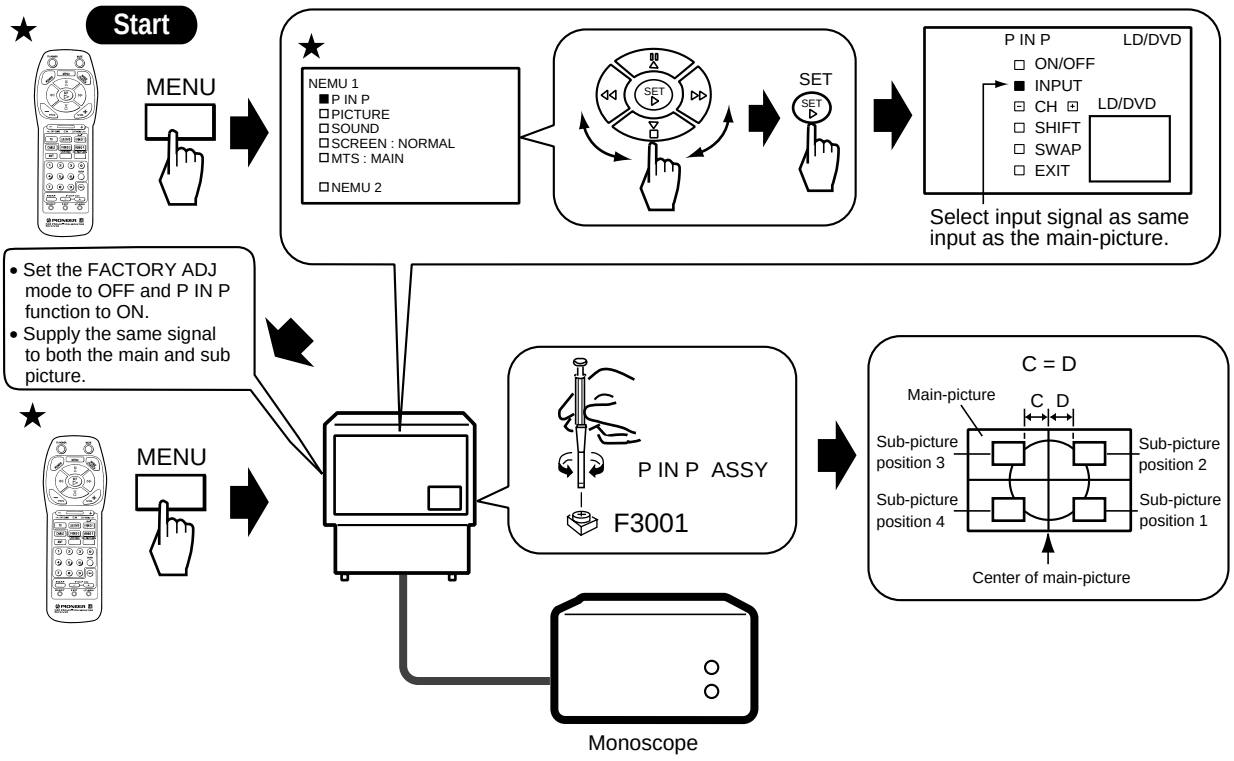
## 19 Read clock adjustment of sub-picture (adjustment for P IN P)

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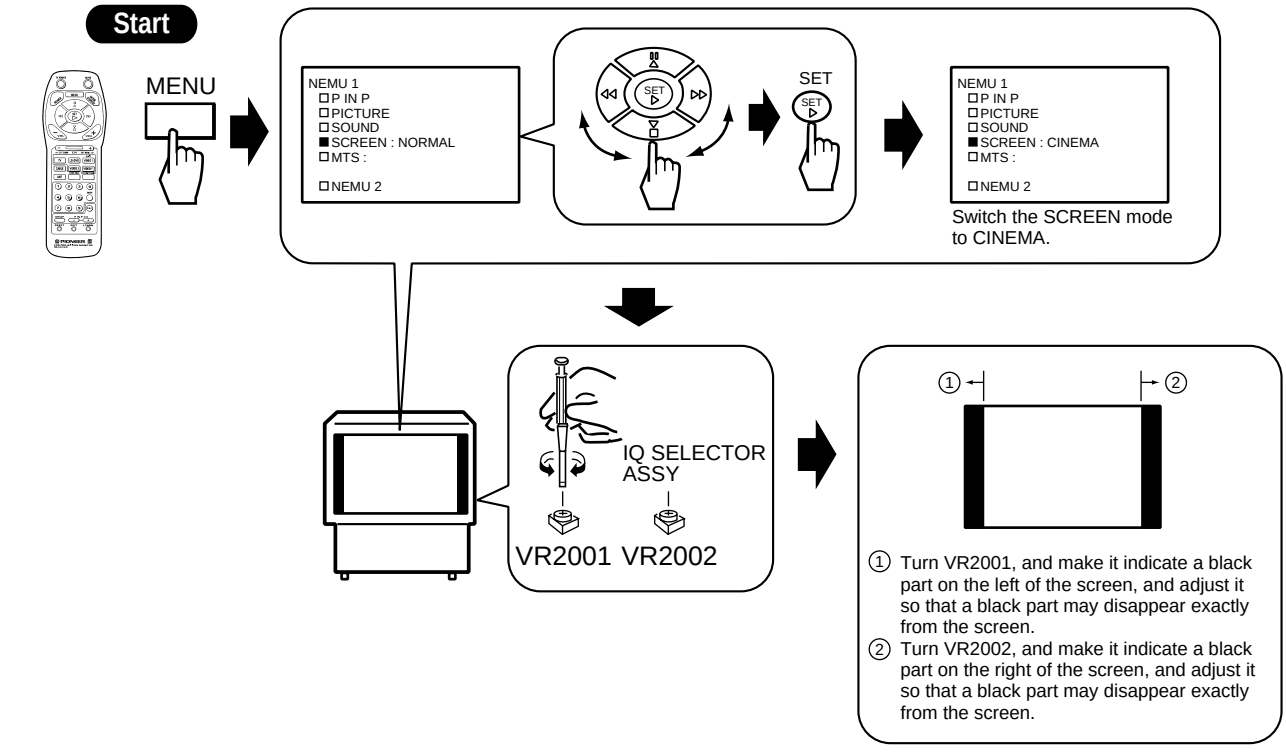
## 20 CINEMA MUTE adjustment


Start
MENU
NEMU 1
P IN P
PICTURE
SOUND
SCREEN : NORMAL
MTS :
NEMU 2
SET
NEMU 1
P IN P
PICTURE
SOUND
SCREEN : CINEMA
MTS :
NEMU 2
Switch the SCREEN mode to CINEMA.
IQ SELECTOR ASSY
VR2001 VR2002
① Turn VR2001, and make it indicate a black part on the left of the screen, and adjust it so that a black part may disappear exactly from the screen.
② Turn VR2002, and make it indicate a black part on the right of the screen, and adjust it so that a black part may disappear exactly from the screen.

# 6. IC INFORMATION

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

## ■ PD5473B (TUNER • VIDEO ASSY : IC801)

### • TV Control μcom

### ●Pin Arrangement

| | | | |
|---|---|---|---|
| H.BLK | 1 (H SYNC) | (P52/R) 64 | OSD.R |
| V.BLK | 2 (V SYNC) | (P53/G) 63 | OSD.G |
| DPO | 3 (P40/AD4) | (P54/B) 62 | OSD.B |
| REMOTE | 4 (P41/INT2) | (P55/OUT1) 61 | OSD.BLK |
| H.SYNC2 | 5 (P42/TIM2) | (P04/PWM0) 60 | DATA2 |
| H.SYNC1 | 6 (P43/TIM3) | (P05/PWM1) 59 | NC |
| AFT2 | 7 (P24/AD3) | (P60) 58 | NC |
| NC | 8 (P25/AD2) | (P06/PWM2) 57 | LIN.W |
| AFT1 | 9 (P26/AD1) | (P61) 56 | V MUTE |
| CONV ENB | 10 (P27) | (P07/PWM3) 55 | DETAIL |
| NC | 11 (P00/PWM4) | (P62) 54 | V.M.MUTE |
| PINP ENB | 12 (P50/PWM7) | (P20) 53 | AC CLK |
| COMP.O/X | 13 (P01/PWM5) | (P21) 52 | ROM RST |
| NC | 14 (P47) | (P22) 51 | RELAY |
| SHARP | 15 (P02/PWM6) | (P23) 50 | NC |
| EXP ENB2 | 16 (P51) | (P10/OUT2) 49 | V O/X |
| NC | 17 (P17/SIN) | (P65) 48 | TV V.MUTE |
| EXP ENB1 | 18 (P32) | (P11/SCL1) 47 | SCLK1 |
| KEY | 19 (P44/INT1) | (P66) 46 | NC |
| TV A MUTE | 20 (P56) | (P12/SCL2) 45 | SCLK2 |
| OPT | 21 (P45/SOUT) | (P67) 44 | CLK2 |
| PINP RST | 22 (P57) | (P13/SDA1) 43 | SDATA1 |
| NC | 23 (P46/SCLK) | (P14/SDA2) 42 | SDATA2 |
| AVcc | 24 (AVCC) | (P15/L1) 41 | NC |
| | 25 (HLF) | (P16/L2/INT3) 40 | CENTER O/X |
| | 26 (RVCO) | (P03) 39 | S COMP SW |
| | 27 (VHOLD) | (P30) 38 | A MUTE |
| CVIN | 28 (CVIN) | (P31) 37 | REC MUTE |
| CNVSS | 29 (CVNSS) | (RESET) 36 | RESET |
| Xin | 30 (XIN) | (P64/OSC2/XCOUT) 35 | OSC2 |
| Xout | 31 (XOUT) | (P63/OSC1/XCIN) 34 | OSC1 |
| VSS | 32 (VSS) | (VCC) 33 | VCC |

### ●Pin Function

**Pin Function**
I:Input Ci:CMOS input No:N ch open-drain output
O:Output Co:CMOS output Ni:N ch open-drain input

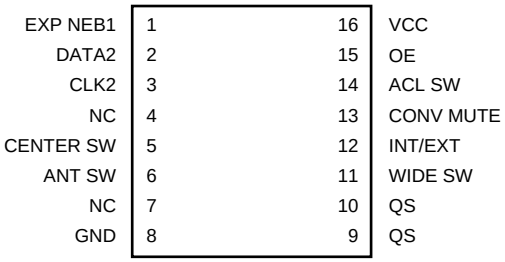
| No. | Pin Name | I/O | Function | No. | Pin Name | I/O | Function |
|---|---|---|---|---|---|---|---|
| 1 | H.BLK | I | Sync. signal input for OSD | 9 | AFT1 | Ci | AFT analog voltage input for tuner 1 |
| 2 | V.BLK | | | 10 | CONV ENB | No | Conver IC (PM0002B) enable signal output |
| 3 | DPO | I | PWM output for DPO level control | 11 | NC | – | Non connection |
| 4 | REMOTE | I | Remote control signal input<br>Decipher the Pioneer SR signal | 12 | PINP ENB | No | Data enable signal output for P in P IC |
| 5 | H SYNC2 | I | Horizontal sync. count input for tuner 1 reception<br>When the status in which there are 12 to 18 H-SYNC pulses in 1 msec continues 8 times, it is regarded that there is a broadcast. When any other status continues 6 times, it is regarded that there is no broadcast. | 13 | COMP.O/X | Ni | COMPONENT input signal detection inpu<br>H: No COMPONENT L: COMPONENT exist |
| 6 | H SYNC1 | I | Horizontal sync. count input for tuner 2 reception<br>When the status in which there are 12 to 18 H-SYNC pulses in 1 msec continues 8 times, it is regarded that there is a broadcast. When any other status continues 6 times, it is regarded that there is no broadcast. | 14 | NC | – | Non connection |
| 7 | AFT2 | Ci | AFT analog voltage input for tuner 2 | 15 | SHARP | No | PWM output for SHARPNESS level control |
| 8 | NC | – | Non connection | 16 | EXP ENB2 | No | Data enable signal output of port expander IC2 (IC1651, I/O) |

| No. | Pin Name | I/O | Function | No. | Pin Name | I/O | Function |
|---|---|---|---|---|---|---|---|
| 17 | NC | – | Non connection | 41 | NC | – | Non connection |
| 18 | EXP ENB1 | No | Data enable signal output of port expander IC1 (IC803, UCOM) | 42 | SDATA2 | Ni/o | $I^2C$ serial data input/output Tuner PLL, Audio multiplex IC, Audio IC, I/O, 3D-Y/C, Video IC and DAC IC (COMPONENT) |
| 19 | KEY | I | Key scan signal input of the main uni Analog voltage input | 43 | SDATA1 | Ni/o | $I^2C$ serial data input/output for $E^2$ROM |
| 20 | TV A MUTE | No | TV audio mute output H: ON , L: OFF | 44 | CLK2 | Co | Serial clock output (P in P, Conver, Port expander 1, 2) |
| 21 | OPT | Ni | Not used Fixed to L. | 45 | SCLK2 | Ni/o | $I^2C$ serial transfer clock Tuner PLL, Audio multiplex IC, Audio IC, I/O, 3D-Y/C, Video IC and DAC IC (COMPONENT) |
| 22 | PINP RST | No | Reset signal output for P in P IC (HD49420) H: ON , L: OFF | 46 | NC | – | Non connection |
| 23 | NC | – | Non connection | 47 | SCLK1 | Ni/o | $I^2C$ serial clock input/output for $E^2$ROM |
| 24 | AVcc | – | Analog power supply Apply +5V. | 48 | TV V.MUTE | No | TV video mute output H: ON, L: OFF |
| 25 | HLF | – | Connect a external part for the CCD timing signal generating circuit | 49 | V O/X | Ci | Video signal existence detecting input H: Signal exist , L: No signal |
| 26 | RVCO | | | 50 | NC | – | Non connection |
| 27 | VHOLD | – | Connect a external part for the CCD reference voltage generating circuit | 51 | RELAY | No | Control signal output of the power supply relay H: OFF , L: ON |
| 28 | CVIN | I | Video signal input for CCD (2.0 Vp-p) | 52 | ROM RST | Co | Reset output for $E^2$PROM |
| 29 | CNVSS | I | Connect to VSS | 53 | AC CLK | Ci | AC clock detecting input Used for detection of AC power OFF. (Reset is generated when no AC clock is supplied for 3 times.) |
| 30 | Xin | I | Input/output pins for the main clock generating circuit | 54 | V.M.MUTE | No | Velocity modulation MUTE signal output H: OFF , L: ON |
| 31 | Xout | Co | Connect a 8.0MHz ceramic resonator. | 55 | DETAIL | No | PWM output for DETAIL level control |
| 32 | VSS | – | Apply 0V to VSS. | 56 | V MUTE | Co | Video mute output (Input switch and power ON/OFF,etc.) H: OFF , L: ON |
| 33 | VCC | – | Power supply voltage Apply +5V. | 57 | LIN.W | No | PWM output for linear white level control |
| 34 | OSC1 | I | Clock input/output for display | 58 | NC | – | Non connection |
| 35 | OSC2 | Co | | 59 | NC | | |
| 36 | RESET | I | System reset Reset is done by applying L for more than 0.95 µsec (when OSC=4.19MHz). | 60 | DATA2 | Co | Serial data output (P in P, Conver, Port expander 1, 2) |
| 37 | REC MUTE | Co | REC OUT mute output H: ON , L: OFF | 61 | OSD.BLK | Co | Signal output for OSD MUTE and velocity modulation MUTE |
| 38 | A MUTE | Co | Audio mute output H: ON , L: OFF (When selecting MUTE mode, switching input, turning power ON/OFF and CH up/down, etc., Audio mute is output.) | 62 | OSD.B | Co | Video output for OSD |
| 39 | S COMP SW | Ci | S input signal detecting input H: S exist , L: No S | 63 | OSD.G | | |
| 40 | CENTER O/X | Ci | CENTER IN (AUDIO) input signal detecting input H : Signal exist , L: No signal | 64 | OSD.R | | |

## ■ TC4094BP (TUNER • VIDEO ASSY : IC803)

### • Port Expander 1 IC

### ●Pin Arrangement



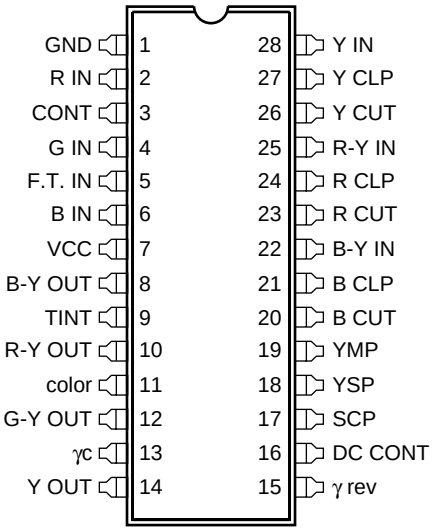

### ●Pin Function

| No. | Pin Name | Function |
|---|---|---|
| 1 | EXP ENB1 | Enable (strobe) input |
| 2 | DATA2 | Serial data input |
| 3 | CLK2 | Serial clock input |
| 4 | NC | Non connection |
| 5 | CENTER SW | Switch the SPEAKERS CENTER IN/NORMAL H: NORMAL , L: CENTER IN |
| 6 | ANT SW | Anntena input A and B switching signal H: ANT. B , L: ANT. A |
| 7 | NC | Non connection |
| 8 | GND | Ground |
| 9 | QS | Serial output |
| 10 | QS | |
| 11 | WIDE SW | Change the screen size H: CINEMA (FULL CINEMA) , L: NORMAL (NORMAL CINEMA) |
| 12 | INT/EXT | Speaker output switching signal output Fixed to INT. |
| 13 | CONV MUTE | Mute output for Conver amp. (STK392-110) H: OFF , L: ON |
| 14 | ACL SW | ACL control H: OFF , L: ON (When the contrast user value is maximized : H (OFF), others : L (ON) |
| 15 | OE | Output enable |
| 16 | VCC | Power supply voltage |

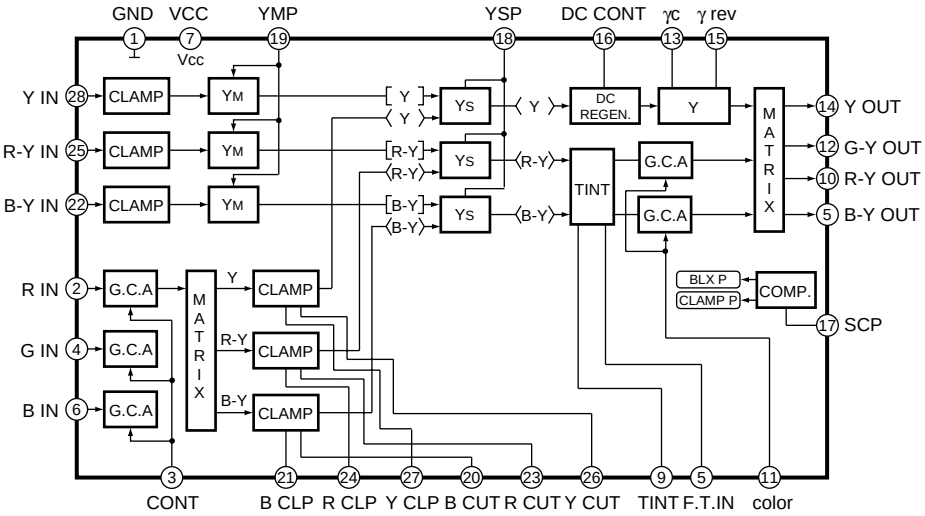
## ■ AN5867K (COMPONENT ASSY : IC7001)

**• Color & Tint Control IC**

**●Pin Arrangement**




**●Block Diagram**



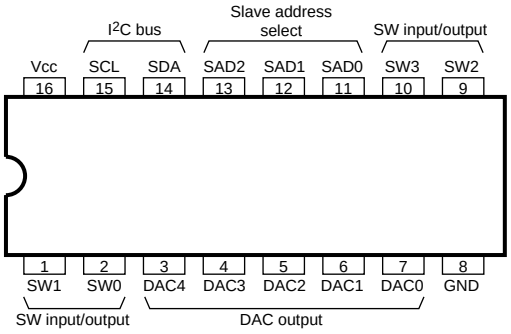

**●Pin Function**

| No. | Pin Name | Function | No. | Pin Name | Function |
|---|---|---|---|---|---|
| 1 | GND | GND | 15 | γ rev | γ correction lead-in level adjustment |
| 2 | R IN | Primary color input R | 16 | DC CONT | DC regenerate quantity adjustment |
| 3 | CONT | Contrast control | 17 | SCP | Sand castle pulse input |
| 4 | G IN | Primary color input G | 18 | YSP | YS pulse input |
| 5 | F.T.IN | Tint correction input | 19 | YMP | YM pulse input |
| 6 | B IN | Primary color input B | 20 | B CUT | B-Y cut-off adjustment |
| 7 | VCC | Vcc | 21 | B CLP | B-Y clamp capacity |
| 8 | B-Y OUT | B/B-Y output | 22 | B-Y IN | Color-difference signal input B-Y |
| 9 | TINT | Tint control | 23 | R CUT | R-Y cut-off adjustment |
| 10 | R-Y OUT | R/R-Y output | 24 | R CLP | R-Y clamp capacity |
| 11 | color | Color control | 25 | R-Y IN | Color-difference signal input R-Y |
| 12 | G-Y OUT | G/G-Y output | 26 | Y CUT | Y cut-off adjustment |
| 13 | γ c | Smoothing capacitor for γ correction | 27 | Y CLP | Y clamp capacity |
| 14 | Y OUT | Y output | 28 | Y IN | Luminance signal input Y |

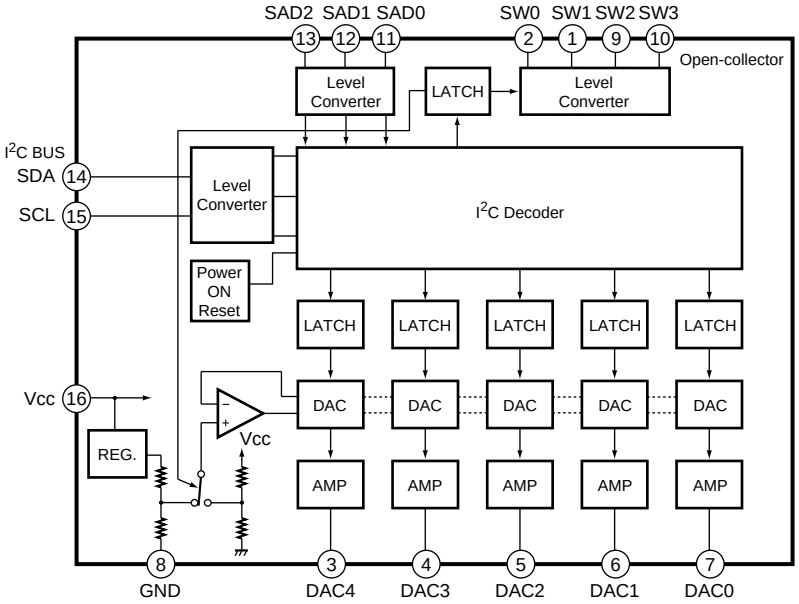
## ■ CXA1315M (COMPONENT ASSY : IC7003)

**• 8 bit D/A Converter for I²C Bus**

**●Pin Arrangement and Function**



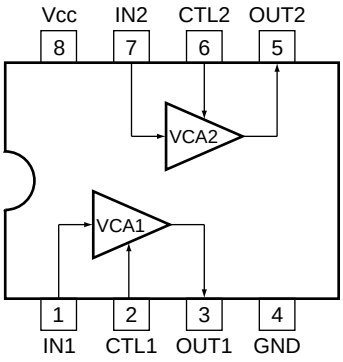

**●Block Diagram**




## ■ BA7655AF (COMPONENT ASSY : IC7004)

**• VCA IC for VTR and Movie**

**●Block Diagram**

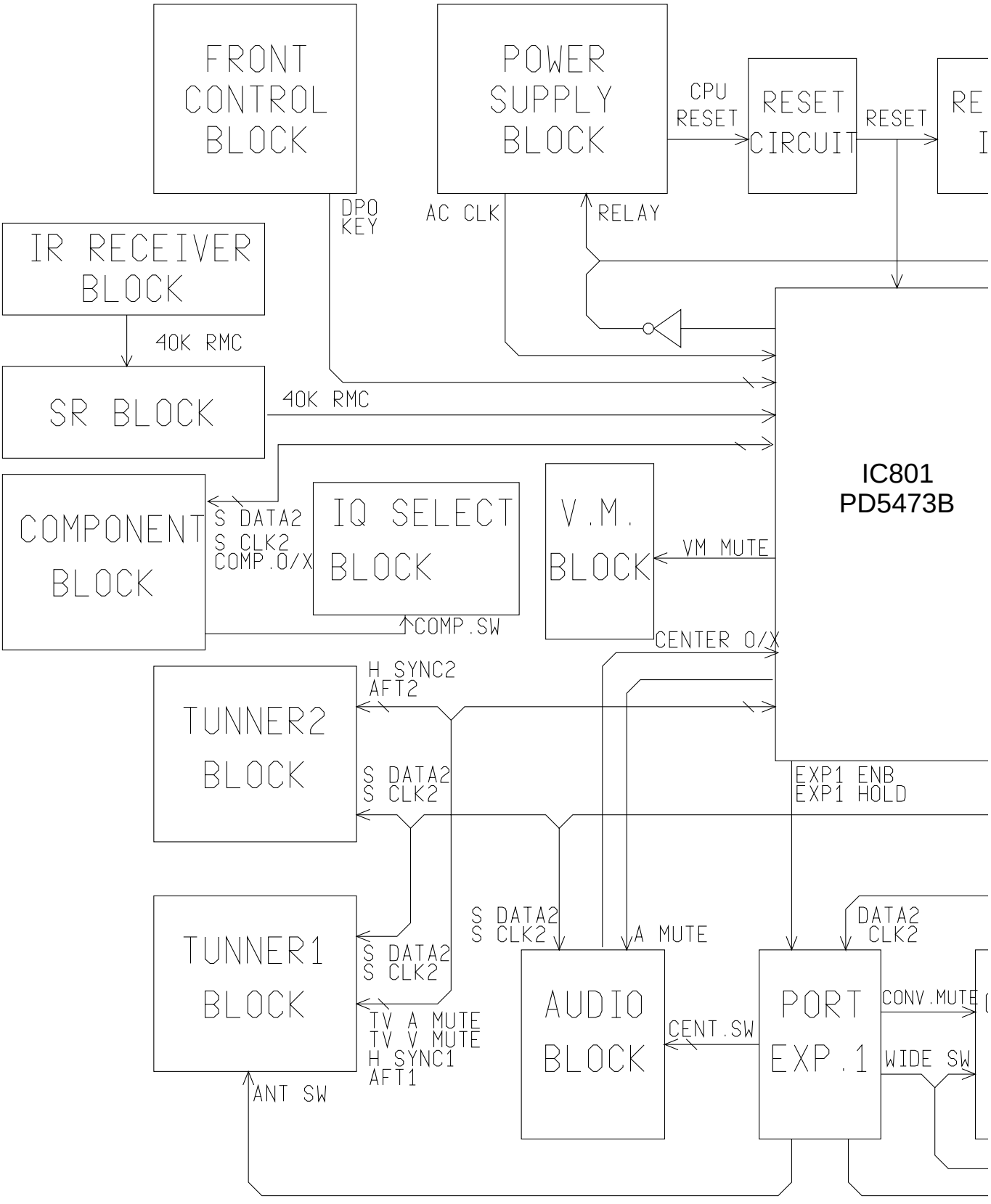


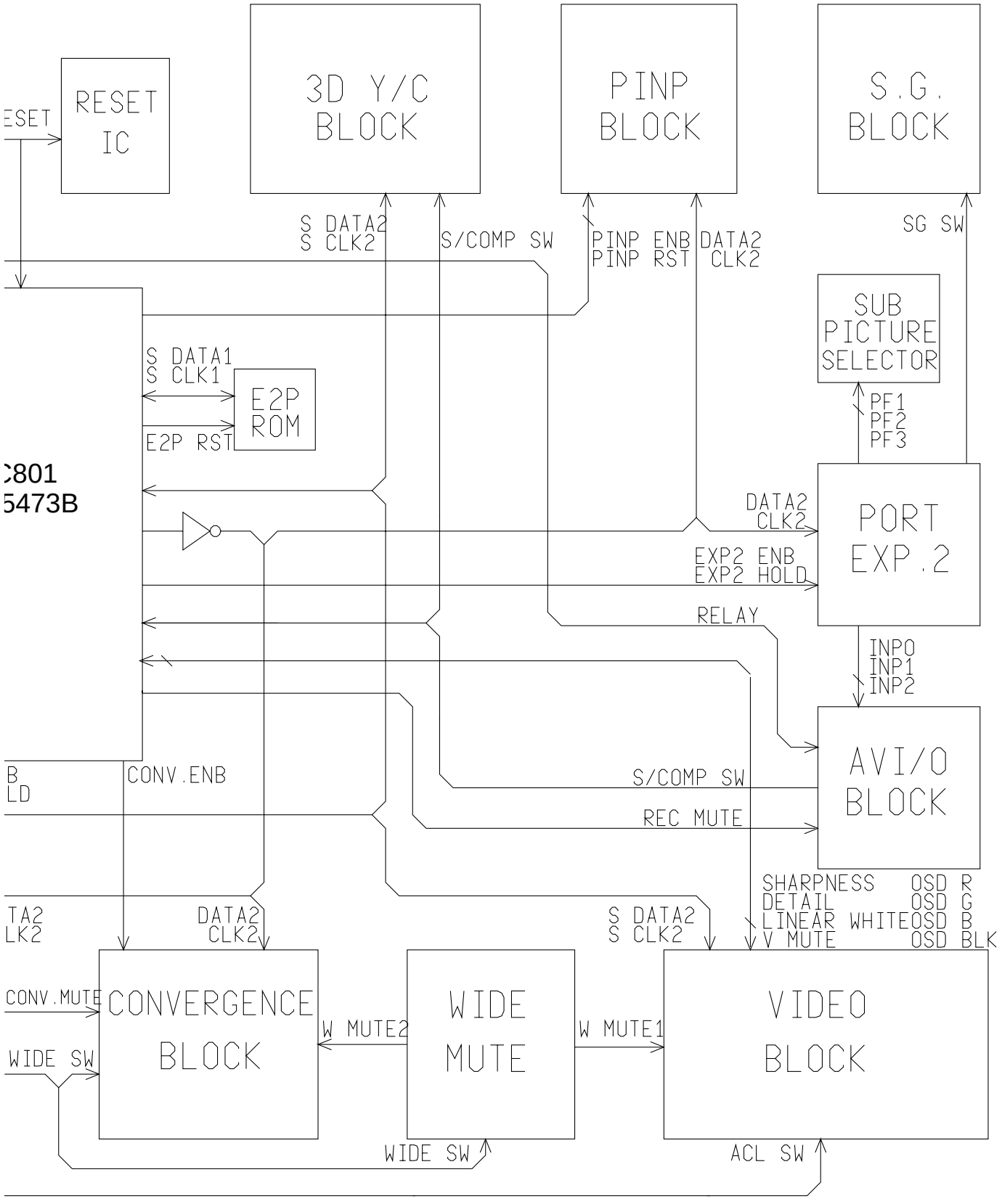

**●Pin Function**

| No. | Pin Name | Function |
|---|---|---|
| 1 | IN1 | Input 1 |
| 2 | CTL1 | Control 1 |
| 3 | OUT1 | Output 1 |
| 4 | GND | Ground |
| 5 | OUT2 | Output 2 |
| 6 | CTL2 | Control 2 |
| 7 | IN2 | Input 2 |
| 8 | Vcc | Power supply voltage |

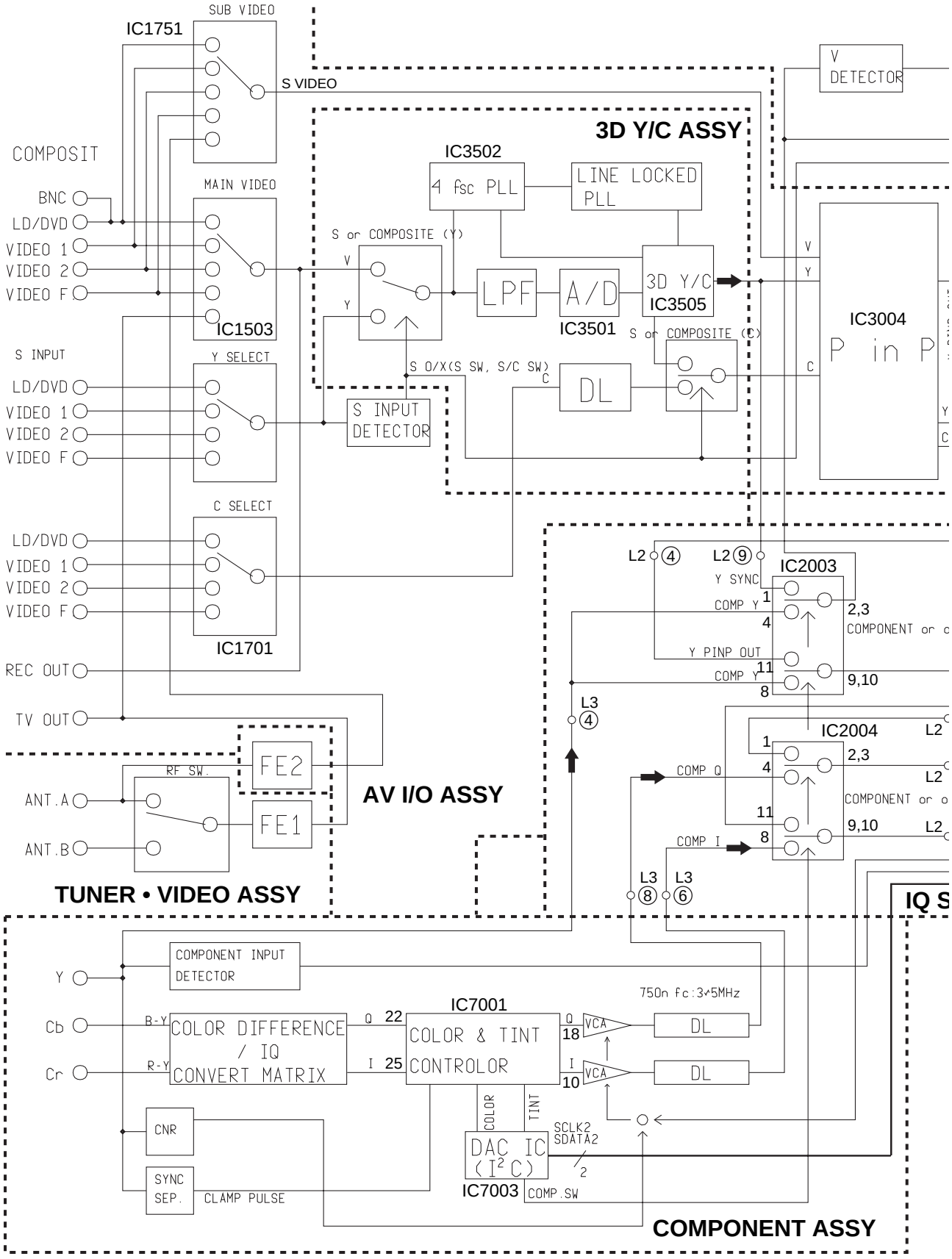
# 7. BLOCK DIAGRAM

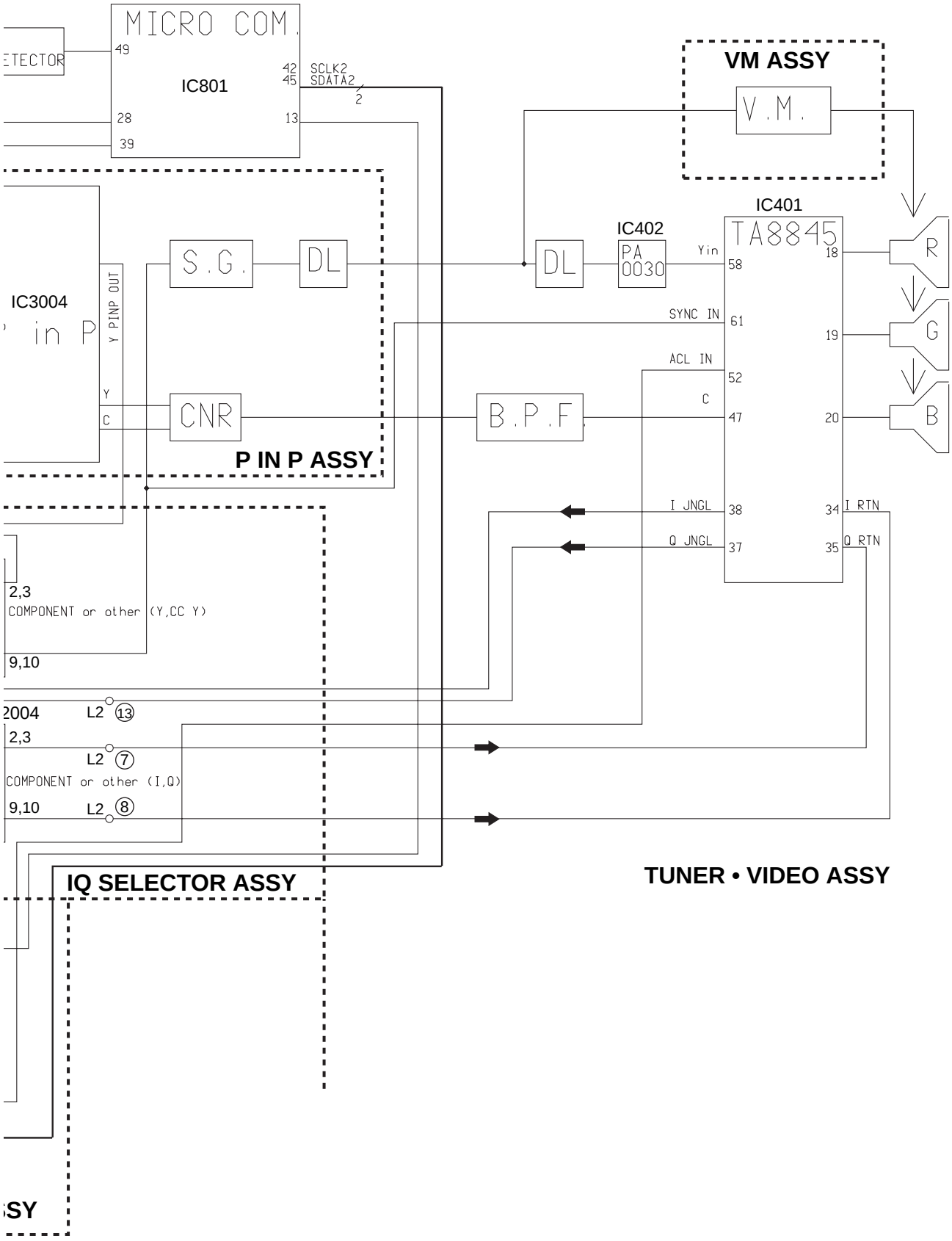
## 7.1 UCOM BLOCK




ESET
RESET IC
3D Y/C BLOCK
PINP BLOCK
S.G. BLOCK
S DATA2
S CLK2
S/COMP SW
PINP ENB DATA2
PINP RST CLK2
SG SW
SUB PICTURE SELECTOR
S DATA1
S CLK1
E2P ROM
E2P RST
PF1
PF2
PF3
C801
5473B
DATA2
CLK2
PORT EXP.2
EXP2 ENB
EXP2 HOLD
RELAY
INP0
INP1
INP2
B
LD
CONV.ENB
S/COMP SW
REC MUTE
AVI/O BLOCK
SHARPNESS
DETAIL
LINEAR WHITE
V MUTE
OSD R
OSD G
OSD B
OSD BLK
TA2
LK2
DATA2
CLK2
S DATA2
S CLK2
CONV.MUTE
CONVERGENCE BLOCK
W MUTE2
WIDE MUTE
W MUTE1
VIDEO BLOCK
WIDE SW
WIDE SW
ACL SW

## 7.2 VIDEO BLOCK




MICRO COM.
ETECTOR
49
IC801
42 SCLK2
45 SDATA2
2
28
39
13
VM ASSY
V.M.
IC401
TA8845
IC402
PA
0030
Yin
58
SYNC IN
61
ACL IN
52
C
47
18
19
20
R
G
B
S.G.
DL
DL
B.P.F.
IC3004
in P
Y PINP OUT
Y
C
CNR
P IN P ASSY
I JNGL
38
Q JNGL
37
34 I RTN
35 Q RTN
2,3
COMPONENT or other (Y,CC Y)
9,10
2004
L2 13
2,3
L2 7
COMPONENT or other (I,Q)
9,10
L2 8
IQ SELECTOR ASSY
TUNER • VIDEO ASSY
SY